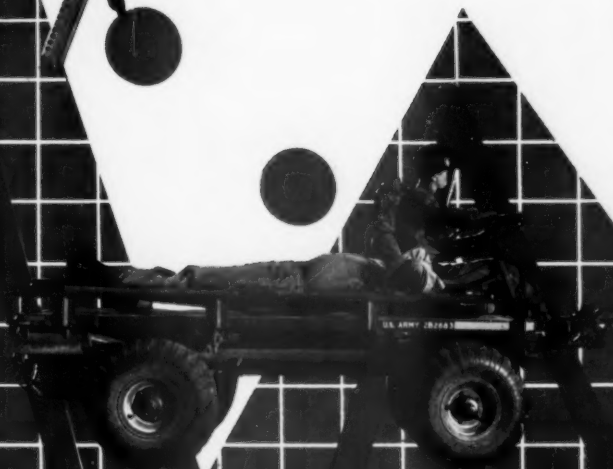


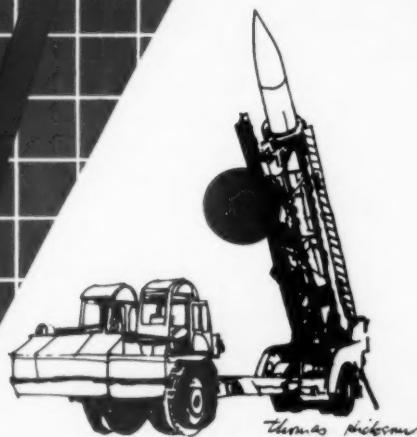
# ARMY

OCTOBER 1958 • 50¢



**MODERNIZATION MINUS**  
The slippage in rearming  
the Army

**S. L. A. MARSHALL**  
The Army in Lebanon



...speaking of

Missile Ground Support

**MOBILITY**



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VAN NUYS, CALIFORNIA AND EL PASO, TEXAS

OCTOBER, 1958

# ARMY

magazine of the ASSOCIATION OF THE UNITED STATES ARMY

Vol. 9

No. 3

October 1958

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Advance man's knowledge of warfare in the fields of strategy, tactics, logistics, operations, administration, weapons and weapons systems.

Advance man's knowledge and understanding of the soldier as an individual, as a member of a trained unit, and as a member of the whole Army; emphasizing leadership, esprit, loyalty, and a high sense of duty.

Disseminate knowledge of military history, especially articles that have applications to current problems or foster tradition and create esprit.

Explain the important and vital role of the United States Army in the Nation's defense and show that the Army is alert to the challenges of new weapons, machines, and methods.

Advance the status of the soldier's profession.  
*AUSA By Laws, Par. 13 Article II*

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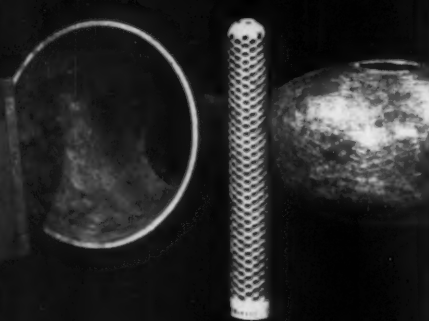
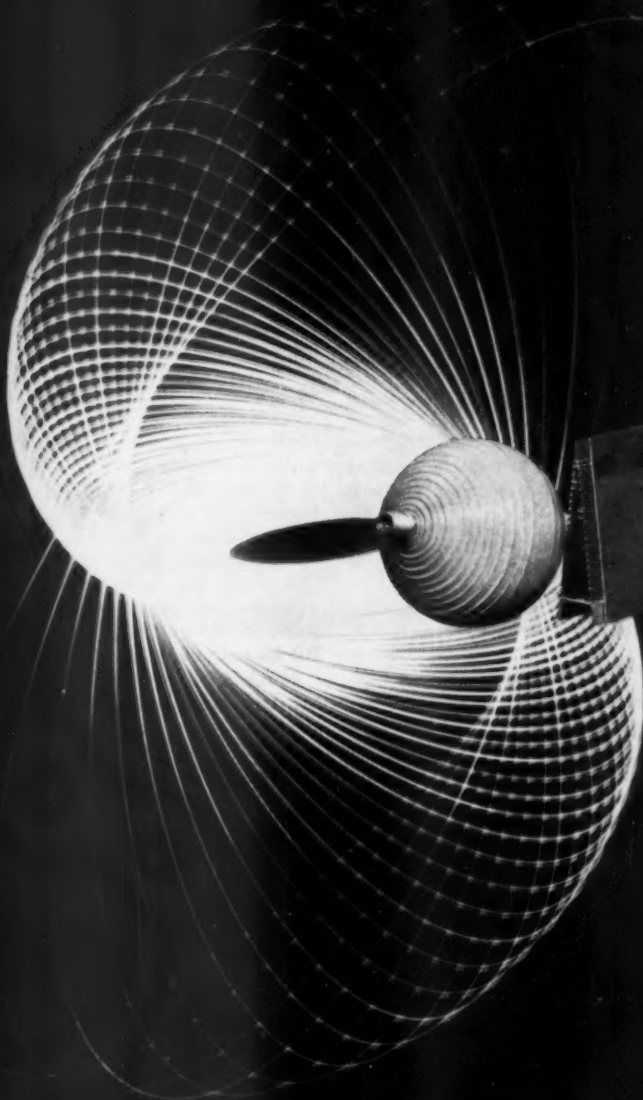
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## THE MONTH'S MAIL

### Bouquet for an Author

• Would you please pass along to Major Gamma Ray my heartiest congratulations on his article, "Another Fable for Today," in the June issue? It's a fine piece of writing.

Gamma Ray is a rare bird in this day and age—a fine, fine satirist. Let's see more of his writing.

MAJ. CHARLES WEST  
Jackson Heights, N. Y.

### Bouquet from an Author!

• I want to thank you for the excellent treatment you accorded my "Mortain Counterattack" [July]. And further, may I compliment you on the beauty of the layout for the piece. I was struck by the effectiveness of the arrangement—sketch map, photos, and text—and I continue to be impressed. I heard some mighty nice comments in the office on how well the magazine has been looking, on how well the material has been presented. All of us hope that ARMY continues to prosper.

CAPT. MARTIN BLUMENSON  
Washington, D. C.

### "What About Airlift?"

• The airlift piece [September] was fine. Let's keep hitting this issue hard. To deny the Army adequate airlift (long-range and tactical) is to cripple the military security of our nation.

But you made a real blooper when you identified the Fairchild Flying Boxcar as an eighty-ton capacity aircraft. Actually it is rated at eight tons.

H. T. SORBEAN  
Chevy Chase, Md.

• Reference your argument that the Nation cannot afford in a financial sense not to give the Army the airlift it needs, I am reminded of a piece I read in *Harper's* magazine a few months ago.

It seems that more than a hundred years ago certain purblind persons made a traffic count of the number of persons

and amount of freight moving between New York and Philadelphia by stage coach and coastwise shipping and "proved" that there wasn't enough traffic to make it economically feasible to build a railroad between the two cities. Others took a chance and built it. The very existence of the more rapid transportation created more business and the builders of the road profited—as did the Nation.

JONATHAN CARMEN  
Alexandria, Va.

### Only One Title Needed

• In regard to General Weible's statement about D/A interest in the NCO grade structure in the August issue (page 6), I would like to say that the Indians he mentions are probably all field-grade officers or higher who didn't ask the sergeants or their officers what they thought of the new plan. In regard to the paper prepared by the Office of the Deputy Chief of Staff for Personnel, I doubt if the change is for the better for the Army. Didn't they say the same thing in 1948 when we did away with the buck sergeant? It seems all these long-range plans last for only ten years or so.

Speaking of prestige, how would all the bird colonels feel if they had to change back to silver leaves after the birds wore out? If the Department of the Army couldn't think up a better plan, the nation is in trouble. All they needed was a new title for E-8, who was not a first sergeant. They could have put an eagle in the center of his insignia and called him a chief sergeant and not lowered the prestige of noncommissioned officers in the other grades.

Why rearrange the furniture for no reason? All the Indians in the Pentagon had to do was think up one title, not mess up the system of grades.

SFC ALLEN H. BECK  
USA, Retired  
Bronx 65, NY

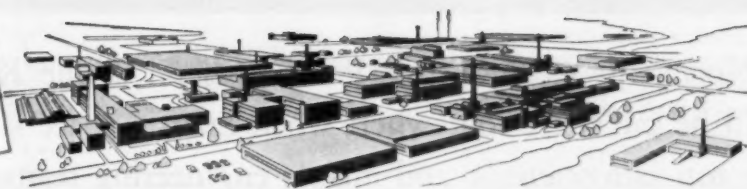
### Indexes are Available

• I am now in my third year as a member of AUSA, and I believe the articles and information in ARMY are of great value. Hardly a day goes by that some question doesn't arise which requires additional research of some kind. Quite often, I have read an article concerning the particular question in ARMY. I find, however, that it is time-consuming to look



SEE  
PAGE  
72





## **NEWEST ADDITION TO RAYTHEON "CITY"**

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engineering space  
to 903,000 sq. ft.*

Raytheon's brand new laboratory at Santa Barbara, California, is devoted to advanced engineering in radar, countermeasures, communications, infrared. It's another extension of Raytheon "City"—the booming electronics community that has grown from Massachusetts to Tennessee to California.

Here are the company's vital statistics:

**POPULATION:** 3,000 scientists and engineers; 32,000 employees in all.

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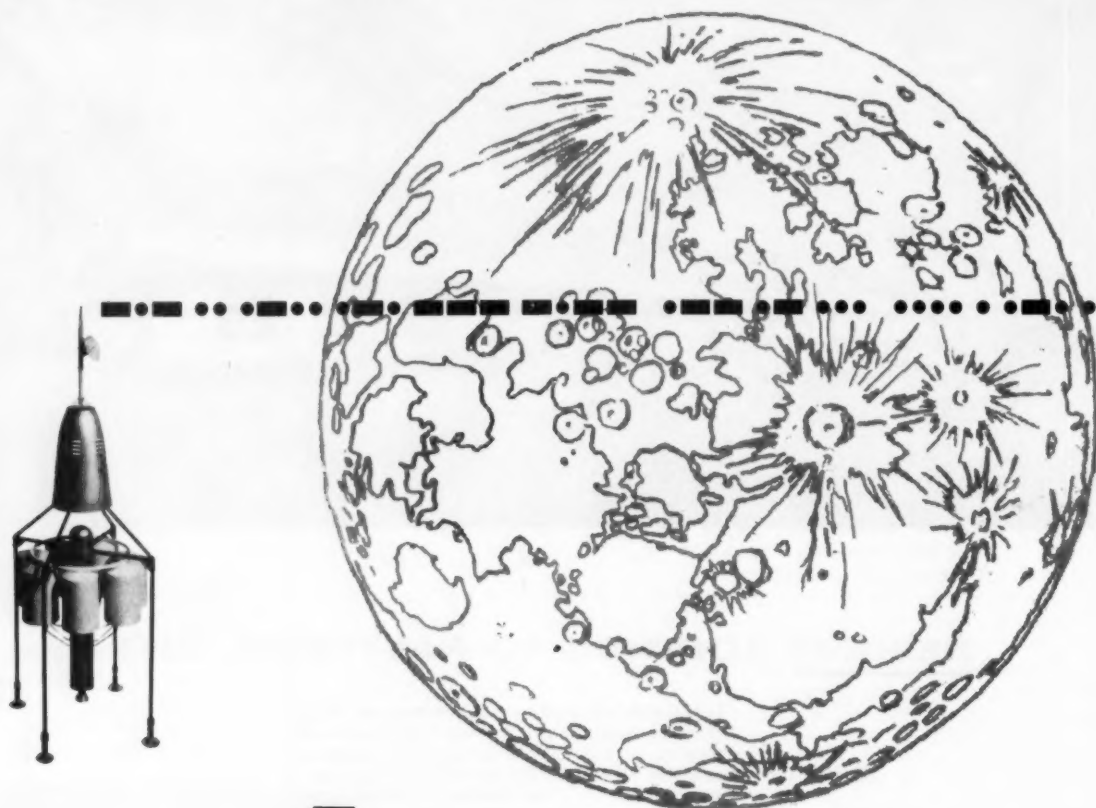
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OCTOBER, 1958

through each issue to find the article I want. Would it be possible to include in the December issue an index of all articles published during the year?

This would assist others like myself who are binding ARMY for permanent file.

CAPT. JOHN C. DE TAR

APO 69, NYC

● ARMY has always published an annual index. Any reader desiring an index annually need only send his request to the Circulation Manager. A copy will go out each year. It is published late in the summer, since ARMY's "year" begins with the August issue.

#### *Brainstorming's Been Around*

● On reading "Want to be a Brainstormer?" in the August issue of ARMY, I received the impression that its author, Lieutenant W. H. Van Herpe, might not know that brainstorming has been around long enough to have been analyzed by some very knowing people, including William H. Whyte, Jr., in his book, *The Organization Man*.

MAJ. DANIEL R. MORGAN

Arlington, Va.

● We can't say whether Lieutenant Van Herpe is familiar with the criticism of brainstorming, but ARMY used the article because it reported what Fort Carson was doing. We think Lieutenant Van Herpe wrote it for the same reason. It's true his report was completely favorable and had no reservations or criticisms, but our readers can make their own judgments.

#### *Award for Good-Will Ambassadors*

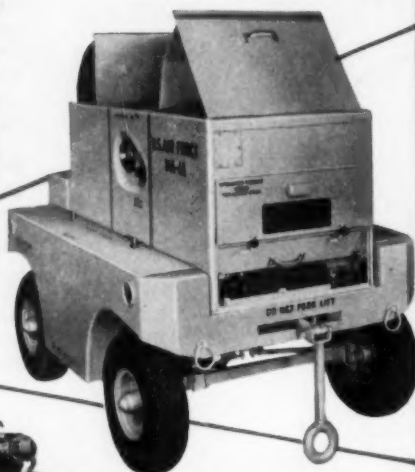
● Our armed services have many awards for heroism and for achievements in other fields of military endeavor. However, it appears to me that one particular field in which persons in uniform have an excellent opportunity to excel, has been overlooked: international relations. There are Oscars for the entertainment industry, the Nobel prize, the Pulitzer and other awards for literature, besides many others. There is none, however, for the military man who, year after year, by his leadership, charity, heroism, character or conduct, has won friends for the United States abroad. For example, the young soldier who saves the life of a foreign child at the risk of his own, does more for the United States than do millions of dollars expended in foreign aid. A successful program of cultural relations, guided by a capable commander, between personnel of a military installation and the citizens of a foreign community promotes understanding more effectively and permanently than any other effort that is measured in dollars.

There should be annual recognition for officers and enlisted men who have done the most for the United States in the field of international good will. I

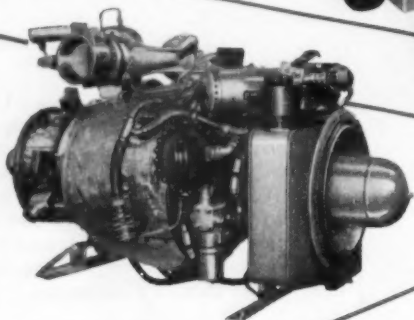
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CAE turbojet engines—the J69-T-9, the J69-T-2, and the J69-T-19B are in volume production for the Cessna T-37A twin-jet trainer, the Temco TT-1 jet trainer, and the Ryan Q-2A Firebee target drone respectively.



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further suggest that this recognition come not from the services nor from the U. S. Government, but from a private foundation. There are many such organizations dedicated to the American way of life, one of which could easily establish such an award.

CAPT. LEON D. LAFFAL  
Fort McPherson, Ga.

## For 12th Army Group Vets

● On 7 November 1958 the 12th Army Group Association will hold its first stag dinner in ten years, at the Army-Navy Club, Farragut Square and I Street NW, Washington, D. C. Two hundred former key officers and enlisted men are expected to attend, including contingents from both East and West coasts. Guest of honor will be General of the Army Omar N. Bradley, wartime commander of 12th Army Group. The last reunion was attended by President (then General) Eisenhower and the late General Hoyt Vandenberg. We are very anxious to have as many officers and men arrange to attend by writing me.

COL. BERTRAM KALISCH  
Brandywine, Md.

## Come on In

● In the review of the book *Soldiers* in the July issue, is a statement that the Regular Army included the 1st to 10th and 24th and 25th Infantry Divisions. I would appreciate information concerning the present location or headquarters of each of these divisions, as I plan to re-up under the unit choice plan next year.

I am a subscriber to ARMY and a member of AUSA. I commend your June issue for Colonel Kraus's article concerning the future of the Army language program.

ARTHUR W. FARASH  
3201 Instl Gp  
Eglin AF Base, Fla.

● Information requested has been furnished.

## For 7th Cavalry Vets

● The 7th Cavalry Association urges all former members to forward their names and addresses to the Association's headquarters at 1932 West 43d Place, Los Angeles 62, Calif.

The Association was organized in 1932 to perpetuate the tradition and spirit of this historic and colorful regiment. It holds annual reunions, publishes bulletins, and maintains contact among members through correspondence. The Association is non-profit and dues are only one dollar a year. That dollar helps defray costs of publishing bulletins and maintaining correspondence.

FORREST M. BEESON  
Commander  
Los Angeles 62, Calif.





## THE NAVY'S DEADLY FLYING FISH

It's called TALOS... a name to remember.

It's the missile now installed on the Navy's newly-commissioned guided-missile cruiser, the *U.S.S. Galveston*. It's a surface-to-air weapon that can knock invading aircraft out of the skies.

### Deadly accuracy

It's part of a weapon system conceived by Applied Physics Laboratory of Johns Hopkins University. Using an air-borne guidance system developed by ITT engineers, TALOS locks on its target... seeks it relentlessly, the way a compass needle seeks North... swiftly overtakes and destroys it.

The deadly accuracy of TALOS makes it one of the most important and successful weapons available for the defense of our skies.

### The Army will use it too

So keen, so accurate is its air-borne guidance system, the Army will use TALOS too. The Navy and the Army are pooling their resources—working in close, effective cooperation—to develop land-borne, mobile launching devices and modified firing controls... to take the fullest advantage of TALOS' remarkable "brain power" and striking power.

### The big job of ITT in missile guidance

TALOS is just one of the missile tasks that have been assigned to ITT. The Army's LACROSSE is another. ITT engineers developed its complete guidance, ground, air, tracking, and computing systems. They contributed to RASCAL, for the Air Force. They developed the launching and firing controls and test equipment for BOMARC,

another Air Force missile. ITT engineers developed, designed and supplied much of the vital communication systems providing telephone service and warning information at the ATLAS intercontinental missile bases.

It's a big job—requiring research, experience, skill, imagination in electronics and other fields. It's a job that ITT is proud to be a part of.



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## FRONT AND CENTER

A "slip-stick" for simplified computing of proper loading of standard aircraft has been designed by Lt. Raymond E. J. Church and Pfc. Charles E. Morgan, both of the 2d Battle Group, 14th Infantry, stationed at The Infantry School. Called a "Load Planning Adjusting Computer," the device consists of a numerical weight scale and numerical distance scale with an index. When the index is set on the poundage to be loaded in a given aircraft, the location of the load in relation to the plane's center of gravity is indicated in terms of a left or right shift in inches from the center of gravity. Such a device can speed up the time it takes to plan an air movement.

Six Naval Academy midshipmen on vacation leave earned paratroop badges

**MAJ. GEN.**  
**MARSHALL STUBBS**  
became Chief Chemical  
Officer of the Army on  
1 September, succeeding  
Maj. Gen. William  
M. Creasy who retired.



and certificates by completing the 82d Airborne Division's Basic Airborne Course at Fort Bragg, this summer.

New procedures for a Ready Reserve Reinforcement plan in time of partial or total mobilization, have been announced by DoD. Generally, the plan provides that "the last shall be first," meaning that the last man out of active service will likely be the first man called back in mobilization. This policy

recognizes that the man most recently trained on active duty ordinarily is the best qualified, and has had the least amount of Ready Reserve service. The plan primarily affects some 800,000 officers and enlisted men in the Army Reserve reinforcement pool. Not affected are some 280,000 who are members of Army Reserve units, who have key mobilization assignments, or who are members of R&D Training Detachments.

Extension courses supervised by The Infantry School are being pretested before non-resident students get them. Two newly commissioned ROTC graduates are the guinea pigs used by the Department of Non-Resident Instruction to pretest the courses. If the young officers find the material confusing or too difficult Department editors take a second look and may rewrite those parts.

The 720th Antiaircraft Artillery Battalion of the California National Guard which took over four air defense sites in Los Angeles on 14 September is the nation's first National Guard missile unit. In training at Red Canyon, N. M., earlier this summer, the 720th four firing batteries posted records that are equal to the training records of active Army firing batteries.

A special transitional training program for retired and otherwise separated officers of the Armed Services, designed to prepare them for positions in industry, is being offered with the fall semester by Temple University's Management Institute. The program will continue throughout the year on a flexible schedule which will consider the specific needs of individual officers. For further information address: Temple University, Management Institute, Cheltenham Ave. and Sedgwick St., Phila. 50, Pa. ATTN: Maj. Gen. Bryan L. Milburn, Director of Transitional Training for Armed Forces Personnel.

An on-the-job training program has been established by the Signal Corps

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### **"TAC" . . . aerial firebreak against brush fire wars**

In spite of the tremendous retaliatory action our Air Force can take in case of attack, the United States Army bears the burden of stamping out the brush fire wars which might ignite the holocaust of World War III. In this heavy responsibility our GIs are backed by the Tactical Air Command which is ready around the clock to provide the Army with the air support without which modern foot soldiers cannot survive. But fire fighting in Kansas or Korea is a dangerous business and TAC will go all out to give its pilots every protection, including Kaman H-43 local crash rescue helicopters.

PIONEERS IN TURBINE POWERED HELICOPTERS

THE **KAMAN** AIRCRAFT CORPORATION • BLOOMFIELD, CONNECTICUT  
NUCLEAR DIVISION • ALBUQUERQUE, NEW MEXICO

OCTOBER, 1958

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### General Officer Shifts

Maj. Gen. KEITH R. BARNEY to Missouri River Division Engineer . . . Maj. Gen. ROBERT G. BUTLER to Picatinny Arsenal . . . Maj. Gen. GERALD E. GALLOWAY to Commandant, USA Engineer School . . . Maj. Gen. LEWIS S. GRIFFING to Fourth Army . . . Maj. Gen. WILHELM P. JOHNSON to USATC (Armor), Fort Knox . . . Maj. Gen. RUSH B. LINCOLN, JR., to Deputy Chief of Transportation . . . Maj. Gen. NED D. MOORE to Director, Office of Personnel Policy, OSD . . . Maj. Gen. DAVID H. TULLEY to Eighth Army . . . Maj. Gen. JOHN M. WILLEMS to OACSI . . . Brig. Gen. IRVIN L. ALLEN to Armed Forces Supply Support Center . . . Brig. Gen. JOHN A. BERRY to Eighth Army . . . Brig. Gen. LORIS R. COCHRAN to USATC (Infantry), Fort Jackson . . . Brig. Gen. FREDERICK W. COLEMAN, III, to OASD (Manpower, Personnel & Reserve) . . . Brig. Gen. ROBERT L. COOK to First Army . . . Brig. Gen. SAMUEL E. GEE to ODCSOPS . . . Brig. Gen. THOMAS N. GRIFFIN to USATC (Infantry), Fort Dix . . . Brig. Gen. JOHN C. HAYDEN to Fourth Army . . . Brig. Gen. JOHN A. HEINTGES to Eighth Army . . . Brig. Gen. JOHN T. HONEYCUTT to 47th AAA Brigade . . . Brig. Gen. DWIGHT B. JOHNSON to ODCSOPS . . . Brig. Gen. JOSEPH H. MCNINCH to Walter Reed AMC . . . Brig. Gen. WILLIS A. PERRY to USARADCOM . . . Brig. Gen. MARION W. SCHEWE to Fort Polk.

**Retirements.** Lt. Gen. JOHN H. COLLIER . . . Maj. Gen. W. PRESTON CORDERMAN . . . Maj. Gen. HARRY W. CRANDALL . . . Maj. Gen. WILLIAM M. CREASY . . . Maj. Gen. JAMES H. PHILLIPS . . . Maj. Gen. ROBERT A. SCHOW . . . Brig. Gen. DONALD B. HARRIOTT . . . Brig. Gen. SAM F. SEELY . . . Brig. Gen. LEGARE K. TARRANT.

to meet the increased demand for officers trained in radio frequency management. Qualifications include a technical radio background of civilian or military experience, and/or education, and the ability to conduct effective technical liaison with other services and governments. Informal applications indicating interest in the program are currently being accepted and should be addressed to the Office of the Chief Signal Officer, ATTN: SIGPA-3-a, Washington 25, D. C.

The Army will cut down on "needling" its members—in other words, fewer and smaller booster shots. Relief is in sight from certain types of injections as vaccines now in use require fewer boosters, as recommended by the Armed Services Epidemiological Board's Commission on Immunization.

The Army's Scientific and Professional Program has paid off in a big way both for the Army and for former soldier-engineer Daniel J. Small. Eight months ago, Small's Army income as Sp-3 was about \$1,400 a year; today as an employee of the Electro-Mechanical Laboratory at White Sands Missile

Range, it is \$7,400. The former soldier gave up a position with a major steel company to remain on his old Army job, and he is now busy designing and supervising environmental tests of missile systems and related components.



Grandma's old stereoscopic viewer goes modern as a photo interpreter with the Seventh Army Air Reconnaissance Company examines aerial photographs of the German countryside through 4-power stereoscopic lens.

Army Chief of Staff Gen. Maxwell D. Taylor, on his recent tour of installations in Europe forecast no reduction in the strength of United States forces in West Germany. The question of the number of troops in West Germany is always coming up, Gen. Taylor said, and from time to time the numbers change, but the firepower and tactical capacity of U. S. divisions remain at full strength.

The Veterans of Foreign Wars at its National Convention in New York in August recommended that the Army be maintained at a strength no lower than 900,000, and that air transport be increased to allow speedy dispatch of two Army STRAC divisions to any troubled area.

More than 5 million World War II and Korean War veterans holding "GI" life insurance policies may now benefit from a new disability income provision in return for a small additional premium cost. Information about the new provision is available at any VA office.

The Army's program for educating its personnel in management improvement and work simplification has been greatly intensified in recent years. During one fiscal year, some 10,000 officers and civilians were graduated from management courses, and some 20,000 supervisors were trained in management engineering techniques.

Army Chief of Staff Gen. Maxwell D. Taylor, in an address at Chautauqua, N. Y., warned that the United States cannot afford to depend on any single strategy, or any single means of reaction, or any single weapons system for the nation's security. "The requirement today," he declared, "is for a flexible, tridimensional strategy involving all three services."

Non-commissioned officers of the Ninth Transportation Battalion, Fort Riley, Kans. recently had an opportunity to see "how the other half lives." The unit's commander Lt. Col. Karl H. Zornig placed his top non-commissioned officers in charge of battalion operations for one week. First Sergeants served as company commanders, headquarters men were in battalion staff positions.





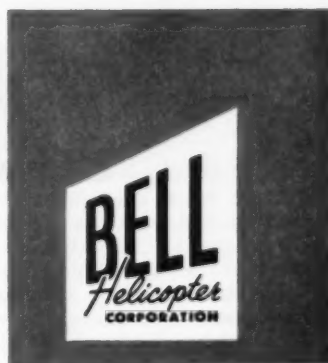
## FROM THE DESERT TO THE ARCTIC..

First helicopter ever developed to meet specific Army requirements for front-line duty, the Bell HU-1A is now taking a series of rigid Army "final exams" before going into action in the field. One of them is the Army Aviation Board's service testing, which will evaluate the combination of equipment and military personnel in their normal operational environment.

Designated the Iroquois by the Army, this all-new, turbine-powered helicopter will be tested by the Board under simulated battle conditions to allow the factors of weather and terrain full play. At a special site near Yuma, Arizona, the Iroquois will go through its "baptism of fire" in the desert heat. One of the most important checks here, and later at Ft. Rucker, will be made on the HU-1A's tactical capability for troop transport, medical evacuation and emergency resupply. In the climatic hangar at Eglin Air Force Base, the Iroquois will go into the deep freeze of  $-65^{\circ}\text{F}$ . Then it will be off to Alaska for actual Arctic testing.

Conclusion of the complete Army shakedown will make the Iroquois one of the most thoroughly tested helicopters in the world...superbly capable of front-line duty...ready to keep Army Aviation "Above the Best." Bell is proud of its role as partner in military aviation progress...of its ability to supply the finest equipment for the military.

## U.S. ARMY AVIATION BOARD TESTS THE IROQUOIS' METTLE



FORT WORTH, TEXAS • SUBSIDIARY OF BELL AIRCRAFT CORPORATION

OCTOBER, 1958

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# AROUND THE WORLD WITH SIKORSKY HELICOPTERS



**FIRE FIGHTING S-58**—Approaching a blazing gasoline fire, a Sikorsky S-58 delivers aerial fire fighting rig and personnel in a demonstration of the helicopter's capabilities in fighting fires, especially those hard to reach by ground

transport. Downwash from rotor blades helps suppress or extinguish fire and protects firemen from intense heat. This unit, carrying 250 gallons of foam, was designed by American LaFrance in cooperation with Sikorsky Aircraft.



**DEEP FREEZE III**—In the Antarctic, large Sikorsky S-58s have joined the S-55s widely used for the past three years in U. S. activities supporting the International Geophysical Year. Their duties include passenger and cargo transport, reconnaissance, and search and rescue. The version of the S-58 shown above, the Navy HUS-1A utility configuration, is transporting cargo in Little America,



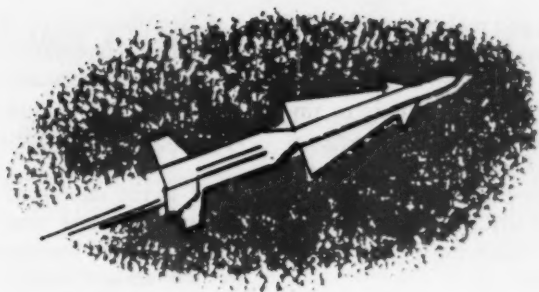
**CHOPPER JOHN**—Twin-engined Army H-37s (Sikorsky S-56s) airlifted Honest John missiles, launchers, and crews at Project AMMO, a missile demonstration at White Sands, New Mexico, and Fort Bliss, Texas, to show how helicopters provide mobility for Army missiles under combat conditions. Other Sikorskys flying at Project AMMO were H-34s (S-58s) and H-19s (S-55s).



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## **THE TRUTH ABOUT HERCULES**

# **Decision Needed In Air Defense**

**I**N recent weeks stories have appeared in newspapers from Providence to Seattle, and from Chicago south, suggesting that the Army's Nike Hercules surface-to-air missile isn't all it might be and should be shelved in favor of the Air Force's Bomarc.

An example of the content of the stories (although no two are exactly similar) was the one appearing in *The Chicago Sun-Times* of 1 September 1958. "Top Air Force missilemen are circulating a highly derogatory analysis of the 75-mile Army missile, claiming it is useless against low-flying aircraft and cannot differentiate between friend and foe," the story said. It added that the "atom-tipped Nike Hercules . . . cannot cope with Russia's fast new jet bombers" and that "Air Force

officials are calling for replacement of the twenty-four Army Nike sites surrounding Chicago with three Bomarc bases."

One significant thing these stories have in common is that they appear in newspapers published in or near communities presently defended or soon to be defended by Hercules batteries. This coincidence has led some persons who have seen the stories and who are familiar with the background to conclude that this is more than accidental. Indeed, one Army communication on the subject states that "there is every indication that this is a carefully organized campaign" designed to convey the impression that Bomarc should replace Hercules.

If this is so, it is deplorable. This is the stuff that in-

### **HERCULES' TRUE RECORD**

In more than 190 test firings of Nike Hercules, and this includes early R&D firings, it attained an average of sixty-five percent of successful firings.

Since it became operational in June of this year, Hercules has been fired twenty-seven times with twenty-three targets hit successfully. This gives Hercules a reliability index of eighty-five percent during its "production improvement period." Six of the twenty-three successful firings were by troops during the Eglin field test.

The total capital cost of a Nike Hercules battalion is

\$19.4 million dollars—a remarkably low figure. This includes \$6.8 million for ground equipment; \$8.6 million for missiles and \$4.0 million for real estate and garrison construction.

Additional evidence that Army missile developers are living up to their motto of always producing "something useful and something improvable" is seen in the fact that Hercules which grew out of Nike Ajax will contribute more than sixty per cent components to the Nike-Zeus antimissile missile.

flames interservice controversy and makes a mockery of the incessant drumbeats by air enthusiasts for "more unification."

More seriously, it serves—whether wittingly or unwittingly—to shake the confidence of many Americans in an all-important element of the system of air defenses that have been created for the protection of U. S. cities, industrial complexes, and SAC bases. The gravity of this can be underscored by observing that it would not be condoned in time of war.

The timing of this rash of newspaper stories is obvious to those who know the background and what is going on in Washington at this time. Briefly stated, it is this.

Believing there is too much duplication in missile weapons designed for air defense, Congress reduced the funds requested for Hercules and Bomarc installations by twenty per cent and instructed Defense Secretary McElroy to determine which "missile or combination of missiles will be employed in each defended area." At the direction of Mr. McElroy the Joint Chiefs of Staff have been engaged in a study of this problem. It seems probable there was hope that a publicity campaign discrediting Hercules would so arouse the people in localities where Hercules sites are established or are to be established as to build a public-opinion fire under Mr. McElroy that would be too hot for him to disregard.

It is highly doubtful if Mr. McElroy could be so influenced, but if that was the intent of the apparent campaign, it was a disgraceful performance and involved distortion that bordered on deliberate falsehood.\*

\* It should be clearly understood that there is no reason to believe that the newspapers were involved in this, or were even aware that other newspaperers were publishing similar material. Each newspaper obviously believed it was publishing reliable news of vital interest to its community.

A decision on a matter like this cannot be made by a popular referendum following a nationwide debate in the newspapers and over the air waves. This is a matter for careful and objective appraisal by competent engineers, scientists and professional military men.

**B**UT at the same time the misleading statements that have appeared need to be corrected. So that our readers will be forearmed with facts about Hercules, we here answer some of the allegations made by these misguided enthusiasts of airpower.

**ITEM.** Nike Hercules cannot cope with Russia's fast new jet.

**FACT.** There is no aircraft in the world today that can fly higher than the 100,000-foot altitude capability of Hercules. The state of the art in jet development at this time precludes such aircraft from exceeding ceilings of about 80,000 feet. Hercules can destroy any aircraft or cruise-type missile which may be operational now or in the foreseeable future and at ranges well outside the target area. Actually, Hercules has an altitude advantage approximately half again as high as Bomarc.

**ITEM.** Hercules is useless against low-flying aircraft.

**FACT.** Hercules has demonstrated the capability of destroying targets at altitudes of less than a thousand feet from the ground. No other land-based air-defense missile has demonstrated this capability except the Army's excellent Hawk missile which has destroyed targets at less than one hundred feet altitude. Hawk was designed to complement Nike defenses in meeting the treetop-level threat. Hercules can engage targets at much lower altitudes than Bomarc. The USAF does not have a weapon comparable to Hawk and, so far as is known, does not plan to produce one.

(Continued on page 62)

#### SENATOR SPARKMAN SPEAKS TO THE POINT

MR. SPARKMAN. Mr. President, . . . Nike-Hercules, the second generation of the Nike air-defense weapons, is the most lethal and most advanced air-defense weapon in the hands of our forces today. We have no other operational weapon which approaches its lethality, accuracy, range, or reliability. The growth potential of the Nike-Hercules is unrivaled, and has been proved beyond question. The next generation of Nike missiles—the Nike-Zeus—is in the hardware-development stage. It is the only anti-ICBM missile in our arsenal which is beyond the drawing board. Its developers are certain of its success.

. . . I believe it is in order to clarify our capabilities in the field of air defense. Therefore, it is necessary, I feel, to point out the operational effectiveness of Nike-Hercules and its proven growth potential. On the other hand, the Bomarc missile is, in fact, an unmanned interceptor. It is not operational and its reliability is discouragingly low—something on the order of 25 percent of the proven reliability of the Nike-Hercules. Its alti-

tude range is distinctly limited. Thus far, approximately \$1 billion has been spent on the Bomarc program, and, I repeat, it is not yet operational. This is more than twice the amount which has been spent to date on the development of the Nike family and the land-based Talos.

Mr. President, I should like to conclude these remarks by calling attention to the essential and fundamental part which has been played in the development of the Nike missile family, the Redstone, the Jupiter, and, as a matter of plain fact, the general development of our missiles by the great missile team at the Army Ballistics Missile Agency in Huntsville, Ala. The experience and know-how of this group of experts in Alabama is unmatched elsewhere in this Nation. It is to this group we owe what success we have made in the field of earth satellites, and to them we should in all logic look for greater and greater developments.

Sen. John J. Sparkman  
On the floor of the U. S. Senate



## RECONNAISSANCE AND LIAISON—ARMY STYLE

Today the Company Commander uses the jeep for reconnaissance and liaison. The Army YHO-2HU (Hughes model 269-A) two-place helicopter, now under evaluation, is specifically designed for this mission.

The YHO-2HU gives the Company Commander a new set of eyes. He can quickly obtain a first-

hand aerial view of enemy installations and movements. With its hedgehopping abilities the helicopter will reduce the hazards of enemy fire.

The small size of the helicopter gives it two additional combat advantages. It is easy to conceal, park and land. It presents an extremely small silhouette in flight.



Engineered specifically for the two-place mission, the YHO-2HU has these additional features—

**Performance:** With its 180 h.p. Lycoming engine, the YHO-2HU flies at speeds up to 90 m.p.h. and has a cruising range of 150 miles. Weighing only 890 pounds itself, it has a 660-pound useful load.

**Economy:** Simplicity and production type engineering result in both low initial cost and low operating costs.

**Ease of Maintenance:** The multiple belt-type clutch contains built-in safety features, is easily removable, and provides a long service life. The horizontally mounted engine is separately removable without special equipment.

See the YHO-2HU at the A. U. S. A. Annual Meeting in Washington, D.C., October 20-22.

**HUGHES TOOL COMPANY**  
AIRCRAFT DIVISION  
CULVER CITY, CALIFORNIA



For an informational brochure on the YHO-2HU please write to the address on the left.

## THE ARMY IN LEBANON

# Amid Doves and Olive Branches

*No time for Andy Griffith*

**Brigadier General S. L. A. Marshall**

**I** WAS with Brigadier General David W. Gray and we were making the rounds of the 1st Airborne Battle Group's unentrenched camp to see how United States Army training went in Lebanon.

What we saw left no room for comparisons past or present. Somewhere under the sun there may be harder, more enthusiastic training, though this I doubt. But since the first shot at Lexington, American troops have never sweated toward possible war in a setting more conducive to beautiful dreams about enduring peace.

In the expansive olive grove which extends for miles parallel to the beaches in both directions from the village of Choueifat (promptly renamed Chewey-the-Fat by troops) squads could hardly zip through bayonet drill without clipping an olive branch.

Their pup tents were pitched amid what is called "the oldest olive grove in the world" and the PIOs were already checking on its history to prove the point. Certainly it looked the part. The husklike, filigreed trunks, out of which the new tree rises every century or so, have a patina from the age of the Crusaders.

Of wild life in and about the camp, nothing was more ubiquitous than the wild dove, except possibly the infestation of juvenile Arab merchants who peddled warm Coke and Pepsi to the troops at sixty cents per bottle until the Army leagued with the local bottlers to sell king-sized iced bottles for five cents. It was the best bargain in Lebanon and the first break during the early weeks when comforts were few and training demands were heavy.

So if a campaign ribbon is ever to be issued for this adventure (do we ever fail?) it could be appropriately a field of white with hairline black borders—denoting an atmosphere of peace amid what would be described as a slight local military disturbance without resorting to euphemisms.

This is not said altogether in levity. There was something about the spirit of USA troops in Lebanon which reflected an admirable adjustability.

They had come to the Levantine coast expecting war, or they knew not what. Landing, they were braced to meet danger. When they learned almost overnight that the situation was cooling, they turned serene and relaxed faces toward the Lebanese, and they won a nation of friends and high respect for the Army uniform.

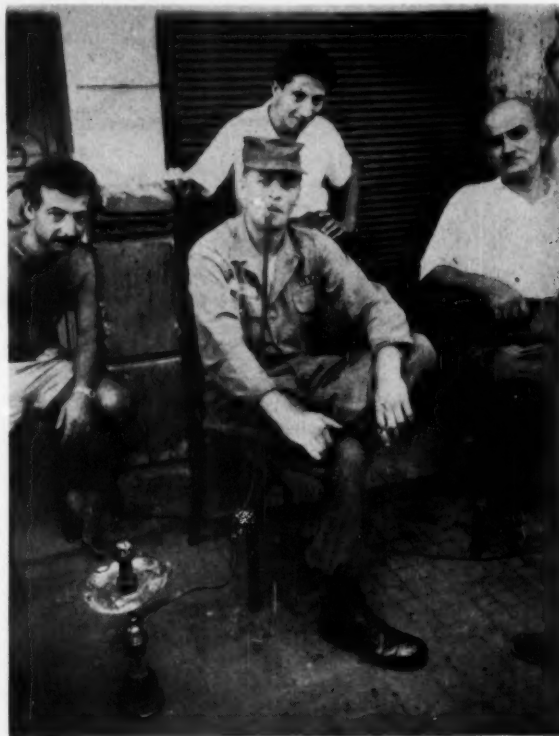
By night occasionally there was rebel fire around the fringes of the camp in the Choueifat olive grove. It was brushed off as any other noise after dark. No sentry cried alarm. The PIOs didn't bother to report that part of the neighborhood was trigger happy. The lack of reaction was as if these men of the 187th Regiment were conditioned to living with fire, which is a healthy outlook for soldiers.

### Outloaded too light

Still, when with General Gray, I made this first swingout through the grove to see what the men were doing, nothing was ideal except that all hands kept

---

Friendly relations with Lebanese are established by soldier who tries out a native water pipe





In the shade of ancient olive trees nurses and soldiers line up for chow.

heads high amid great difficulty, work was proceeding under full throttle and once again the American soldier was proving that the essence of morale comes from some inner light, such as pride in the outfit, rather than from the PX, the USO and an overly indulgent quartermastership.

There was no PX, no athletic equipment, no fare but field rations and no place to go but the bivouac area and the adjacent beach. There had been no mail from home. They had been ashore for about ten days and they were a dirty army.

Lightening the load of the soldier is ever a decisive object. But when the point is pressed too hard, a force may become outloaded a little too light. This one did.

It took aerosol bombs to Lebanon but it carried no mosquito netting. The Choueifat pup tent camp swarmed with mosquitoes by night and the little demons are malarial. So the nocturnal battle was fought out with aerosol bombs and recourse to forced feeding of chloroquin, which isn't the best way.

They had come to Lebanon with only one change of socks and underwear. It may be enough when washing facilities are plentiful. It is not enough where men go

through the rigor of eight hours of bayonet, grenade and squad deployment exercises daily on ground where the layer of dust and duff makes a sweating soldier grimy within five minutes.

It is not enough when they patrol sixteen miles into the hills and return, doing it afoot, that they may become legged up, rather than to save gasoline or because a vehicle may tempt a sniper. There was little real danger in Lebanon.

Initially, there was no water in the camp for showering and no equipment. All washing was done from helmets. Amid the olive trees there bubbled a beautiful artesian spring with just enough potable water to keep the Lyster bags filled. From shortage of water and hygiene a plague of athlete's foot became the main camp affliction.

#### Gratitude expressed in bath water

There were no other casualties in the infirmary, no cases of malingering or slacking and little or no complaining out loud. Part of the environmental curse was eased by a grateful Arab farmer who took pity on the dirt-stained Americans. His garden hose was run to

the stone wall bounding the bivouac. All day long he pumped water and tired soldiers queued to scrub off neath the nozzle.

For this service he asked nothing. He said that prior to their coming he was paying 200 Lebanese pounds monthly for protection from the rebels. Then the Yanks came and delivered him:

Out of such little acts of kindness all men become kin. But all Arabs who tend olives in the Choueifat district are not equally indifferent to a chance for profit.

To provide an access road into Camp Martini, as the place became pet-named because of its setting, thereby achieving more flavor than if it had been christened in honor of a dead general, four of the ancient trees had to be cut down.

The Lebanese owner was asked their value by General Gray. He counted the olives on each tree and reckoning their current market worth multiplied it by 150, saying he knew the trees would bear at least that many more years.

Such incidents were among the features of the set-

ting-in which may find a place in Army lore lasting beyond the time when the reasons for the Lebanon intervention will be remembered.

Old soldiers of the future will recall the olive trees, the choking dust of the Choueifat camp and how the grove itself superimposed a training halter on the command which gave sergeants and squad leaders for once a chance to shine above all higher ranks.

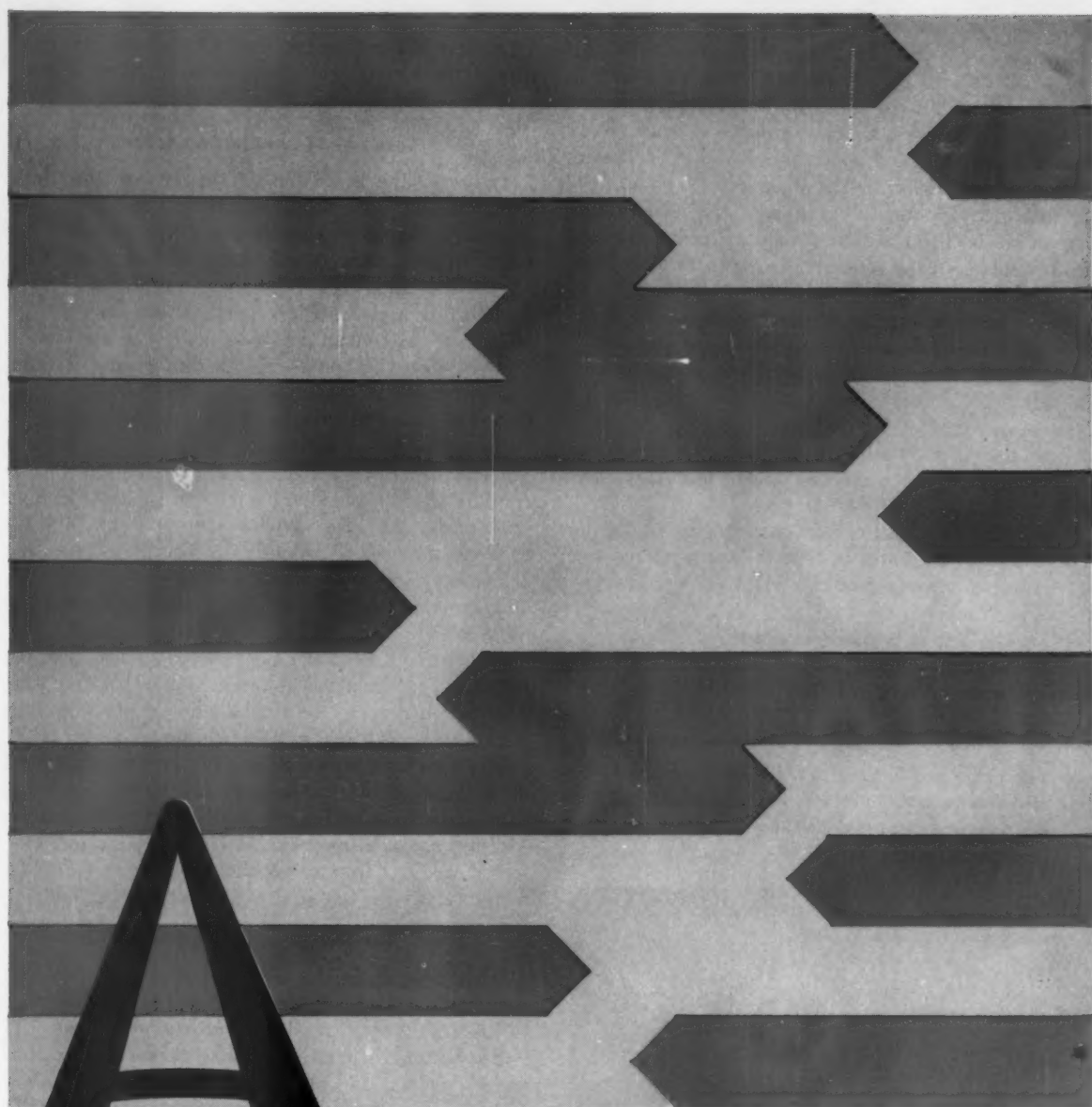
#### Time for sergeants

The grove was laid out in perfect squares so tight that the higher branches almost touched. This meant that, except for road marching, no training exercise could be conducted at higher than squad level. There wasn't room anywhere for any large drill assembly. Each square was a perfect box where the leader kept his small group working hard through the hours of light. Captains and field grades could simply move about looking things over and getting a bang from the way in which the grind had become energized. At Choueifat camp everyone had time for sergeants.



No All, Blue Cheer or Sudso, but salt spray has its day on a Levantine beach.





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and built the largest rocket engines in use today.

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But there was no time for worry about things which couldn't be helped. Why no mail from home? When do we get back to our dependents? Can we ever get pass privileges and move out from this cheerless grove? As General Gray and I moved around, it would have seemed more natural if some junior leader had asked these questions, reflecting the anxieties of his men.

There was no hint of it. Perhaps the novelty had not yet worn off, or maybe we are maturing sturdier, steadier soldiers than formerly. One can at least hope when all outward signs warrant it.

But at last one sergeant of Bravo Company emerged from the training dusk to ask an intelligent question.

"Can you tell me when we are likely to get back to Germany?"

Gray answered: "Well, why?"

Said the sergeant: "Men are worrying about the football season. The team was up top last year. Now if we can just get back there in time. . . ."

I told him: "You better start scrimmaging under the olive trees. If you return in time to hear a referee toot his whistle anywhere near the Main or Neckar, boy, you've had luck."

He said: "You're breaking my heart."

His comment typified a force which stayed philosophical under conditions which would try a saint.

---

The peace and quiet within the U. S.-occupied olive orchards didn't extend to the streets of Beirut where motorized Lebanese patrols moved through the streets in search of rebel hangouts



This has been their great achievement. The men under Gray and Major General Paul D. Adams have conducted themselves with tremendous military dignity, and the power to endure shines in their faces.

#### Eyes on the road to Damascus

It did not fret them that the Marines, getting there first, stole the spotlight. They arrived a few hours late, wasted no motion and by their zeal and patient goodwill converted every casual visitor to their camp. Correspondents and VIPs loved the Army as they saw it in Lebanon and the PIOs simply did a bang-up job of making the contact possible.

They rode the bottom of the low ground. Politics had put them in that disadvantaged, unmilitary position. They were supposed to stay inconspicuous.

From the flat at Choueifat, where the main ridge line of Central Lebanon starts its rise to south of Beirut, running all the way almost unbroken for about twenty miles to the great peak of Jabal Sannine, they could lift their eyes to the high ground, of which they knew little or nothing, save that it was important.

They would point to the road running up the forward ridge and say: "That's the strategic terrain." Veterans of the Korean campaign would muse that the ridges looked not greatly different except that they were smoother, had more forest and the houses perched along the rimrock more nearly resembled home.

But their eyes were on the road. It was one branch of the highway that curving over the mountains, led to Damascus. Its other leg was north of the city, and the Marines patrolled that way. If real trouble came, both forces would advance *via* their nearest road to the heights above Beirut and the city would be pinched out.

#### The forbidden high ground


That was all the high ground meant to them, for they could not visit it, and they will no doubt return to Liberty's shore some day never having seen it.

But beyond the crestline lay a world such as they had never dreamed and of which Beirut, with its narrow streets and traditional Arab ways, provided no sample.

Along the continuous ridgeline are spread the wealthy towns of Aley, Bhamdoun, Sofar and several others. They have the touch of home. At the cocktail bars the shakers will mix up a good old-fashioned or whisky sour. All of the vacationing small boys try to dress and act like James Dean. Loudspeakers in the village squares blare such current favorites as "Witch Doctor," and "Purple People Eater." The aged gentlemen, Arab Christians who wear red fezzes and smoke their hooka pipes contentedly through the day, sit at the tables of the open-front cafes sipping American soft drinks.

Nothing along that vast and heavily populated plateau is quite what one expects of the Middle East. But that is the lesser point.

Just a few thousand feet above the pup tents of  
(Continued on page 63)



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# MODERNIZATION

We're unpreparing for another re-equip-while-we-fight war, though we all agree there won't be time



It's Modernization Minus because—

- The amount of money available to the Army each year for modernization—about \$1.5 billion—is not enough to hold the line against wear-out and obsolescence.
- Consequently there is a small but discernible slip-page in combat capability each year and no funds at all for building even a small reserve of weapons and equipment.
- As a result Army combat organizations now have only about sixty per cent of the combat capability they would have if fully equipped with modern weapons.

During the height of the Lebanon crisis this past summer, Representative Robert L. F. Sikes of Florida asserted that the rifle being carried by our soldiers was older than and inferior to those of the rebel Lebanese—and of the Soviet Army, as well. This is true. But Mr. Sikes need not have centered his attention on the rifle. He could have said the same thing about machine guns and mortars.

He could have noted—

- That funds for development and production of tactical air vehicles for the Army—aerial jeeps—are insufficient.

- That more modern ground vehicles are also needed: jeeps, Army Mules, 2.5-ton trucks, and especially the improved and lighter T-113 personnel carrier.

- That there is an insufficiency of relatively small surface-to-surface firepower support weapons, such as the Little John and missile-type antitank weapon.

- That there isn't enough money to buy adequate quantities of the new Mohawk, an aircraft vital to the all-important task of battlefield surveillance and target acquisition.

- That production of radios and other electronic equipment for battle communications is lagging for want of funds.

- That too little is being allocated to a most perplexing problem: how to supply the atomic battlefield.

The Army has a five-year modernization program that calls for the expenditure of \$3 billion a year on modernization. This would be \$1.5 billion to hold its own and \$1.5 billion to build up a small but respectable reserve for emergencies.

Colonel Wermuth's article, which begins on the facing page, tells us why prompt action to modernize the Army is essential.



# MINUS

**LIEUTENANT COLONEL  
ANTHONY L. WERMUTH**



IN today's military context, modernization resembles the soldierly task of training: it is absolutely essential, thorough and comprehensive, but never finished. In ancient times, military modernization was like the refurbishment of a wardrobe merely by adding a new toga and pair of sandals, the adoption of one new weapon or battle formation by a nation's armed forces might be all that was needed to gain a margin of victory over a not so progressive opponent. A new formation, costing nothing extra to evolve, might even become fully developed during somnolent years of peace. But new weapons cost money; usually the imminence of war was needed, then as now, to accelerate equipment of forces with even one new weapon.

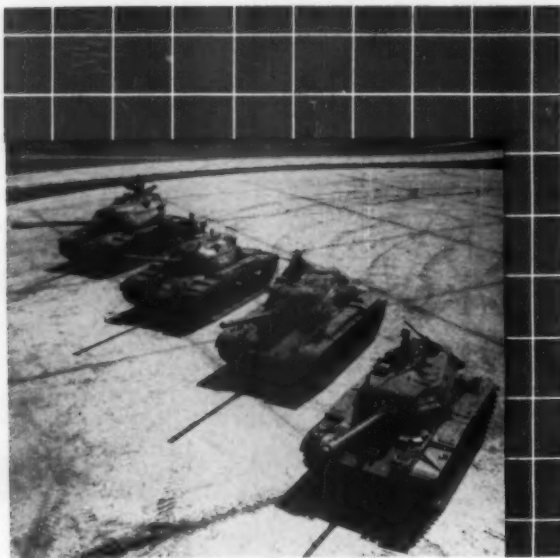
Our own experiences provide ready examples: while

by 1939 portions of our Army had developed advanced theories in several fields such as armor and aviation, and despite the fact that we had already adopted the triangular division, essentially we had to reequip ourselves with modern weapons while we fought with what was on hand—P-40 aircraft, outmoded tanks, some Springfield rifles, 75mm artillery, 37mm antitank guns, and so on. Not that we didn't know what modern weapons were needed. The Army simply had not the funds that would reequip it with modern arms, and pathetically little for research and development. Had it not been for the period of grace between the declaration of emergency in the summer of 1940 and the outbreak of war in December 1941, during which some vital programs were begun, we would have been much worse off—perhaps dangerously so.

Korea found us pretty much repeating the modernize-while-you-fight practice, although we had to back up and turn around on one item—close-support aircraft. When we found that jet aircraft in power and design had run away from the battlefield, P-51s had to be resurrected. However, that exception was due far more

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**Lieutenant Colonel Anthony L. Wermuth, Infantry**, a 1940 graduate of West Point, served in the Alaskan Theater during World War II. Now a student at the Army War College he worked on the modernization problem during a recent tour of duty in the Pentagon.



to neglect of the close-support mission in aircraft design than to any overenthusiastic modernization. In practically everything else, we modernized as we fought, just as we did in World War II.

The great new element in the problem of modernizing the Army is—even more than The Bomb—technology itself. Proceeding on dozens of fronts at once, with a burst of incredible speed here and a quantum jump there, today technology sweeps ahead, leading no one is quite sure where—antibiotics, fusion, fission, Salk vaccine, radar and television, microminiaturization, earth satellites. It was only during the highly prolific past fifteen to twenty years that these products or procedures came to a state of usefulness. But pouring out of the laboratories and testing stations, all these innovations, some profoundly influential, are arriving at once, within a short space of time. What will the next decade bring?

It is obvious that in matters affecting national defense, we dare not lag in technology. It is just as obvious that during an indefinite period in the future the condition of current obsolescence and its attendant expense must be accepted; we cannot accept the risk of remaining idle. In earlier times, the difference in products developed a hundred years apart could be, and often was, negligible. Today, one year's difference in the development of a weapon may give an enemy an intolerable advantage. Just as his family makes every effort to get suitable clothes for a fast-growing boy of fourteen, knowing he will outgrow them in a year, so it is with the critical business of arming and equipping modern forces. Last year's advanced missile may be next year's "Model T." We may deplore the expense and the uncertainty of this condition, but it is foolhardy to ignore it.

Accordingly, the Army must continue, as it does now, to so juggle its resources as to modernize on three levels: it purchases from production the best

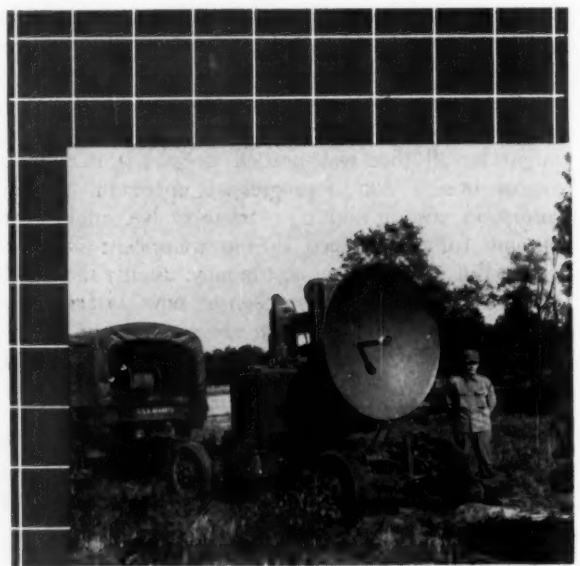
that is available at the moment; it develops improved weapons to replace many now on hand; and it aggressively researches second- and third-generation replacements for almost all weapons and equipment. Its current research and development program alone, exclusive of new items actually coming into production this year, includes some four hundred projects, subdivided into some two thousand tasks.

Current reequipment and current development and research programs embrace such diverse subjects as wound research, training methods, missiles, "cold wet" boots, upper atmosphere phenomena, grenades, portable atomic munitions, automatic data-processing machines, and chemical agents that stun instead of kill.

Tactically, of course, the great innovator of former military theories, formations, organization, and maneuvers is the nuclear warhead, whether fission or fusion, whether arriving by artillery round, bomb, missile, or in a truck. Our armed forces make much of their difficult metamorphosis into the atomic age, but that adjustment has cost no other service that soul-searching and agonizing reappraisal which the Army has had to make regarding its role in land warfare.

#### Evolution of ground tactics

Before World War II, airmen made sweeping predictions as to the effectiveness of bombing. While aerial bombing had accomplished certain results, these sweeping predictions never materialized, nor even came close. However, the development of a transportable fission weapon (which bore no relation to airpower in itself) unexpectedly made the predictions, especially those of pure destruction, possibly realizable. To drop a nuclear bomb requires no fundamental changes in the airman's training. Perhaps the greatest effect of the nuclear warhead on airpower is that airpower's great logistical complexes have become as vulnerable (and in their inflexible aspects, more vulnerable) as those





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of any other military force. The Navy appears to have had to make a more difficult adjustment in reaching the atomic age. Nevertheless, in many respects combat at any spot on the high seas is obviously not significantly different from that at another.

In any event—and without deprecating the great problems overcome by sea and air forces—the greatest revolution had to be made in land forces, simply because of the infinite variety of tactics possible on the battlefield, not to mention the potential variation in weapons effects alone. Atomic warheads might be used amid deserts or low hills, or among sharp mountains or jungles, or skyscraper cities. The evolution of new ground tactics required basic, creative analyses and solutions, attainable only through slow and painful thought, with violent disagreement among land soldiers themselves.

For example, firepower had certainly reached some kind of apex. Perhaps the ultimate had been reached, perhaps too much was available—at least, in useful form. (This paradox continues today: each increase in the size of an atomic weapon decreases its usefulness; it becomes too big to be used.) In any event, the familiar sequence was: develop the scheme of maneuver first, then the fire plan to support the scheme of maneuver. But with atomic firepower, it appeared that the reverse would become standard procedure, that the scheme of maneuver would have to support the fire plan.

To give an example, dispersion and more dispersion become obviously desirable tactics, in view of the dangers in massing, not only on the battlefield, but in the sprawling logistical domain in the rear—depots, hospitals, traffic centers. Clearly, and contrary to hasty conclusions by superficial observers, this dispersion would be expensive in manpower; clearly, we would need more vehicles and drivers to service ten dispersed fifty-bed hospitals than to service one concentrated 500-bed hospital.



**Modernization by steps**

At last, the most painful and elementary period of analysis for land forces was suffered through. Agreement, while not universal, began to coalesce around various basic principles. Gradually, on an elementary skeleton, the flesh of detail began to grow. Today, while there remain many unresolved—even unexplored—aspects, the Army has a fairly substantial basic tactical doctrine for the atomic age battlefield. The point is that the development of doctrine was as much an aspect of modernization as was weapons development; in fact, that aspect had to come first, before the new organization and before the new weapons and gadgets. It is important to realize that this exploratory phase has been completed. We know how we will fight an atomic war, at least initially, and the kinds of warfare we consider as potential (which may or may not include atomics).

The next step in modernization was to evolve, in the light of the best-informed projections of weapons capabilities, the best organization. Thus our Pentomic division evolved, and all active divisions, except armored, have been converted. No one pretends that this is more than an interim answer to the problems of optimum organization; indeed, more advanced concepts are being explored, and some are even being tested at such places as the Combat Development Experimentation Center (CDEC) at Fort Ord.

The final major step in modernization was to discover new weapons and to perfect and produce them as rapidly as possible. In practice this step has rivaled the development of doctrine as the slowest and most difficult step of all. A principal portion of our difficulty lies not in the development process itself, but in the atmosphere in which we must obtain these weapons—an atmosphere of horror at their accelerating and astronomical expense, and one of frustration at the increasingly expensive necessity of replacing these weapons with more advanced models within a relatively short time.



Part of this horror is legitimate and is shared by the Army itself, particularly as it contemplates the appalling, inexorable rise in costs per weapon without much hopeful prospect of a comparable rise in the means for procuring them. A large part of the atmosphere which makes modernization difficult is not quite "legitimate." It has been influential for at least a decade now and arises largely from obsession with airpower, with nuclear destruction theories that see less and less need for armies in a thermonuclear war. Despite the unlikelihood of such a war, and despite communism's enormous gains during the past decade without recourse to anything approaching a nuclear war, year after year the Army has been steadily reduced in strength and funds, on the strange theory that with fewer units, men and weapons, it is getting more powerful.

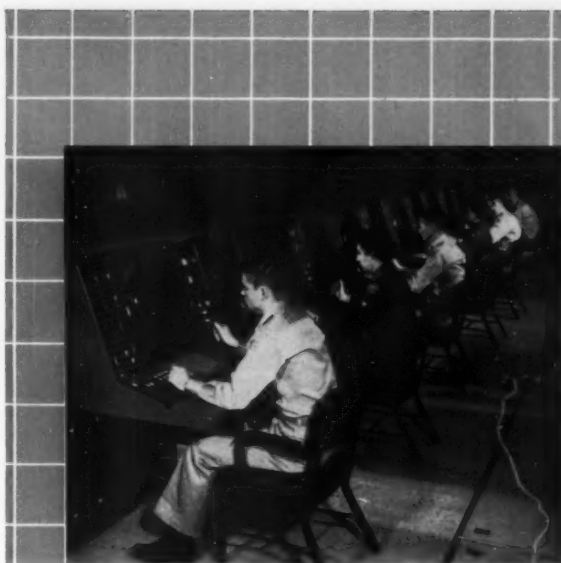
We are inclined to stress the need for a flexibility in our national arsenal that will include ready Army divisions plus the air- and the sea-lift to move them to distant areas completely equipped; manned bombers, carriers, IRBMs, ICBMs, submarines—most or all of these might be highly useful. Despite the confident assurances of some prophets, no one can foresee the true importance of any of these tools of war, any one of which may prove more or less decisive than expected in the unpredictable circumstances of future combat.

The Army has had to spread its money thin, both in shopping for the limited amount of improved equipment that is available today, and in researching and developing improved weapons that will be indispensable if it is to compete on the battlefield five to ten years from now.

Recently in *The New York Times*, Hanson Baldwin said:

In addition to its concern over our airlift weaknesses, the Senate committee apparently felt that the United States Army needed more modern equipment quickly.

United States weapons now ready for production or in advanced stages of development may well be equal or superior in quality to Soviet weapons—but the Army budget

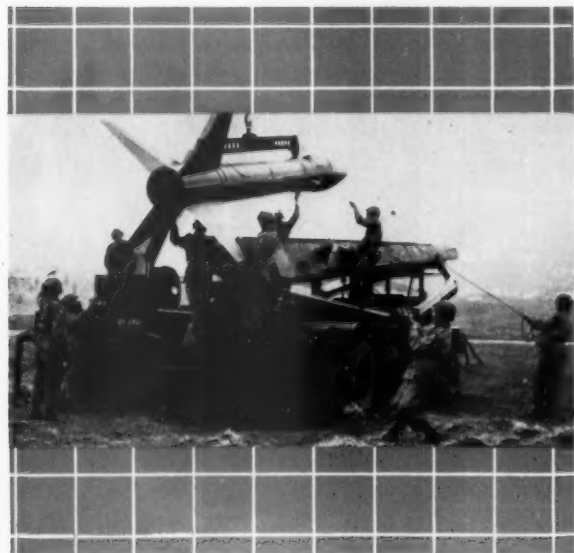


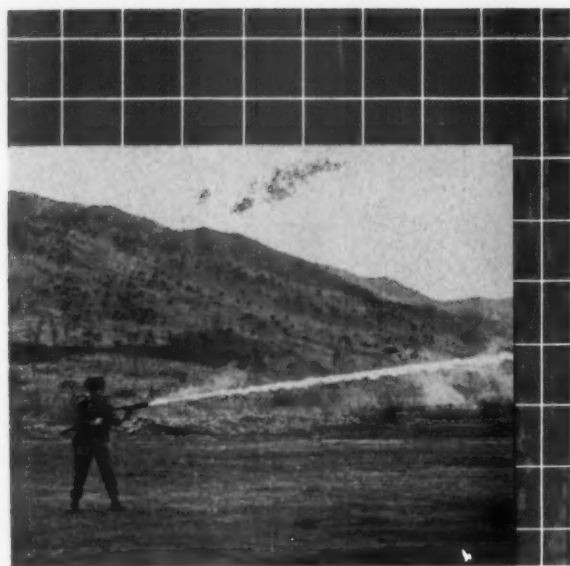
has not included sufficient funds to expedite production and to get these new weapons into hands of troops.

In the fields of research and development, as distinguished from current modernization, many factors have combined to reduce progress to a pace that is sometimes less than desirable. Technological difficulties, overextended debates on relative merits, and the like are costly in time. But one would be foolish if he failed to realize that the shortage of research and development money had been an additional major factor. Some equipment just going into production in Fiscal Year 1959, and on first-time procurement, could have been ready a few years ago; and some which will not be ready for a few more years could have been on hand now.

The armored personnel carrier, for example, without which some contemplated tactics on the atomic battlefield will not be possible, is not yet available in any quantity; some divisions have none. The new rifle and machine gun are in production, but it will be years before they will be in the hands of all our active units. Similarly, in response to greater demands on communications in dispersed atomic battle areas, practically a whole new inventory of signal equipment has been perfected. But again, production is slow and few field units are properly equipped. Meantime, despite a greatly revised organization and tactical doctrine, combat units as usual are trying to do with the same old equipment until the new gear arrives. The 101st Airborne Division, as an experimental unit, was given much of this new equipment, some in quantity, but the flow to other units has been sporadic or incomplete.

It is impossible to predict the life of weapons. The new rifle and machine gun may remain fairly stable, but artillery, complicated by missiles, is in the proverbial "state of flux." Since all missiles and rockets haven't yet the accuracy closely to support combat units, and since atomic warheads must be fired





from considerable distances, there appears to be no immediate lessening of the requirement for close-support artillery. The role of long-range interdiction artillery may well, however, atrophy, as atomic warheads are fitted to increasingly accurate missiles. We hope that all the artillery the Army develops in the future will be self-propelled.

No current discussion of Army firepower can afford to ignore our steady insistence on developing more small-yield atomic weapons. During a TV appearance in the spring of 1958, Lieutenant General James M. Gavin briefly referred to our need for atomic warheads "about the size of a volleyball," that can be carried by infantrymen. Such a weapon would have great portent for the future by multiplying a thousandfold or more the offensive and defensive firepower in the infantryman's hands, thus lightening his requirements for heavy firepower support from outside his own unit. The Army has been hampered in its efforts to obtain small-yield atomics by the same atmosphere referred to earlier: absorption with the thermonuclear exchange of destruction. Hanson Baldwin also commented on this point recently in *The New York Times*:

"Principal arguments in favor of building a new reactor to produce plutonium and tritium have been advanced by Army. . . . Small weapons with yields of two to ten kilotons or even less are of major importance in tactical concepts of tomorrow's Army. . . . Small nuclear devices to be used against platoon or company positions, strong points, or battlefield fortifications are considered essential by the Army's leaders."

#### Army missile developments

In missiles, the Army is second to none. This fact would be well known—in fact, obvious—to everyone were it not for the welter of claims for lesser weapons with which our reading has been saturated. In air de-

fense, for example, the Army not only produced the free world's first operational defensive missile, Nike-Ajax, but further developed and refined it as the father of a family of missiles whose talents appear to be more than equal to any challenges of the future, whether by manned aircraft, air-supported missiles, or ballistic missiles to include the ICBM. We are pushing as hard as our brains and funds will allow to develop sophisticated management systems for the electronic direction of these missiles in future air defense.

The Army also developed Corporal, the free world's first operational offensive guided missile, and Redstone. Redstone, as the main element of Jupiter C, set the pace for the Western World when it projected Explorer I into orbit. These missiles all present a solid record of incomparable deeds already achieved, and not words about deeds promised or hoped for.

We have developed a carefully evaluated and integrated family of other missiles—Lacrosse, Honest John, Little John, and the others—which have been discussed elsewhere. Their capabilities complement but do not duplicate one another. According to our timetable of development of second- and third-generation missiles, we will produce models to supersede the gradually outmoded (though currently irreplaceable) members of our missile family.

#### Weapons we need

In other modernization projects in the field of firepower, the Army seeks better grenades, mines and artillery rounds. Other forms of warfare for which we have always borne responsibility are the chemical and bacteriological. With agents already clearly improved over those of World War II, the Army seeks further advances both in agents and in means of efficiently disseminating them.

Armor is a companion of artillery in the ubiquitous



"state of flux." A primary combat tank to replace the M48A2 is under development but it is impossible now to predict when it will be available. Improvement in the characteristics of metals, more powerful and more economical engines, and more versatile fuels may lighten the tank while increasing its power. Considering the nature of the atomic battlefield, the tank's role appears to be secure for an indefinite period; indeed the tank may prove to be the workhorse. Conversely, we are developing a family of antitank weapons, the highest of which, with a range of some five hundred yards, is principally a disposable launcher, a heavier member of which is likely to be a guided missile like Dart.

Target acquisition and combat surveillance are being elevated to a status of importance comparable to firepower, mobility and communications. As is frequently pointed out these days, the range and other capabilities of weapons now exceed the ability of means to accurately locate suitable targets; and the Army is pressing for potential solutions along many lines. Some of these, such as radar, TV, and aircraft, are obvious. In communications, the trend is toward greater power and smaller size. The transistor permits amazing reductions in size and weight of equipment; but even more, microminiaturization is being accomplished by means of printed circuits and application of the flake principle. Unfortunately, even the equipment now ready for production is not widely available.

#### **Army aircraft and engines**

In aviation, our interest in low-level use of the air above the battle area has been adequately substantiated by this time, and current aircraft have been described elsewhere. In general, modernization will simply replace familiar types with more improved versions of the same general models. In the works, however, are radically improved air vehicles, both rotary and fixed-wing. Eventually the various models and numbers will be reduced to a small versatile family of about five types. Eventually, the Army hopes to produce the flying jeep, perhaps mounting weapons, as a useful vehicle. Further advancements, such as improvements in gas-turbine engines or new design in airfoils, may be adapted for Army uses. We expect a great deal from the new versatile Mohawk plans just coming into production.

Improved engines for armor and aircraft have already been mentioned, but, of course, our interest in developing more efficient motors and fuels is fundamental to the mobility of our whole system of land support. Various new concepts are being thoroughly explored, such as the GOER concept, an adaptation of the principles of heavy vehicles used in the construction industry. A related project was recently displayed in the Overland Train, with its great wheels that promise logistical support regardless of the accessibility of roads.

To provide power for these great wheels, as well as

for many of the innumerable tasks for which the Army will be responsible in land installations, we need to develop atomic power in package reactors. The Engineer R&D Laboratories have already produced a 500-kw reactor, and within a few years will add others of desirable capacities; we hope to make at least one type mobile. In relation to its contemplated use of atomics, the Army is pursuing many lines, such as protective clothing and detection devices. It should be more widely realized that we have the unique mission, even on an atomic battlefield, of remaining to continue the fight. Success will be necessary in many research fields if we are to accomplish this unprecedented mission.

#### **The replacement problem**

Many statistics and characteristics relating to today's weapons and on the numbers in the hands of units are, of course, classified. However, enough has been said here to indicate that while what is available for production is modern and can meet the challenges of modern war, not all units are fully equipped.

Even if the Army were currently fully equipped with the most advanced weapons, their replacement with satisfactory successors would still be a matter of grave concern. This problem receives as high a priority in current attention and effort as anything else the Army is doing today, consistent with its many missions and the availability of funds.

An important factor which drastically affects the Army's readiness, but which is almost completely beyond its control, is the dependence upon the Air Force and Navy for prompt air- and sea-lift. Despite the law which requires that these services provide these lifts, the Army's needs have never been satisfied and do not appear likely to be within the foreseeable future. In an emergency like Lebanon, the small scale of the initial deployment misleads superficial observers into thinking the Marine Corps might handle the job of early deployment. Brigadier General T. R. Phillips, the military analyst of the *St. Louis Post-Dispatch*, discussing this recently pointed out that the Marine Corps "is not organized to carry out 'sustained' operations on land."

**T**HE Army's efforts to modernize are strained to the maximum every day, but it accepts the need for continuous change. In the context of the modern military world, the Army has no quarrel with the remark of Cardinal Newman: "In a higher world it is otherwise; but here below to live is to change, and to be perfect is to have changed often."

Passing in review in its new, modern uniform, the Army is neither perfect nor perfunctory in its approach to modernization. Within certain limits, it is as modern as Explorer IV. If its weapons do not yet quite fit its spirit in modernization, that spirit continues to press the Army ahead, as fast as funds and fate permit, through the gateway to tomorrow.

# Hitler and Khrushchev: Mein Kampf Kremlinized



*The President of the Association of the U. S. Army draws on his years of experience as an ambassador and soldier to remind us that the Kremlin under Khrushchev has not changed, that its goal is world domination, and that we must keep alert and prepared to counter a threat that is ubiquitous in operation. This article was drawn from an address General Biddle delivered recently to the Tatra Club of Luzerne County, at Kingston, Pennsylvania.*

## **MAJOR GENERAL ANTHONY J. DREXEL BIDDLE**

*President, Association of the U. S. Army*

I HAVE long wondered why those who encourage the thought that Khrushchev is seeking a fresh approach to disarmament and coexistence forget and overlook some important lessons of history and the real nature of the Kremlin.

Part of their argument is that the Kremlin would welcome, just as would we, relief from the heavy burden of military costs. This may be so—at some presently unforeseeable time, but only if the Soviets achieve world preeminence through the threat of their excessive armed strength, or through its use in battle.

We should remember, too, that the effect of military expenditures upon the economy and psychology of the people of Soviet Russia is not the same as in our country. The question of bettering the standard of living of the individual in our free country is not a matter of similar importance in the Soviet police state, where the individual is merely another number. And, whereas our dollar economy is tied to gold, the Soviet

economy, as in the case of that of the former Nazi regime, is an economy of totalitarian despotism, which is, in effect, tied on to the back of labor, which, with a gun in its kidneys, steps up its production, or else.

I'm sure some of us will recall the no doubt well meaning, yet unrealistic estimate from western sources in the years leading up to World War II, to the effect that Hitler's economy, and, among other things, his comparatively low steel production would not permit him to make war. Yet, he was able to exploit what steel production he had at his disposal so as to cause the world a pack of trouble. These are just some of the things that seem to have been forgotten.

### **Mein Kampf Kremlinized**

In Russia today, as in the years leading up to, and including 1939, an expansion-hungry totalitarian government rules in a powerful military country. Instead



of Hitler—this time it's the unscrupulous Khrushchev, who seems to have taken many a leaf from *Mein Kampf*, and, what is even worse, Kremlinized its content. Hitler used to talk as Khrushchev does now. He would proclaim his desires for peace and his wishes to avoid war. It was not until 1937 that Hitler's despotic actions prompted Britain and France to conclude that they could not hope to endure in a Europe dominated by Hitler. Meanwhile, however, all actions in the nature of appeasement, including the statement published following the Godesburg Conference between Prime Minister Chamberlain and Fuehrer Adolf Hitler, were proclaimed as "peace in our time."

In the mid and late thirties, Hitler had flaunted his tanks and his bombers in the faces of visiting foreigners. The purpose of the show was, of course, to intimidate other countries into believing resistance would be useless. Consequently, safeguarded by the fear generated by his vast armed strength, Hitler pocketed one country after another—while others helplessly looked on, each with the prayerful hope that it might not, in turn, become the victim of Hitler's expansionist intentions.

It was at about this juncture that from ingenuous, timid, credulous and defeatist sources in Britain and France, and even in the United States, voices were heard to proclaim that "You can do business with Hitler." Just as today, there is an audible refrain that "You can negotiate with Khrushchev."

Sure—maybe we can. But it would be only prudent, I think, that those of this school of thought not overlook the importance of realistically evaluating the Communist doctrine and the mentality of those who direct the thoughts and actions of militant communism. The answer is that experience has shown, and documentary evidence has borne out that the Communist doctrine is one of irreconcilable, total, permanent conflict between classes, and between the capitalist and Marxist concepts.

#### **Our cold war is Kremlin's total war**

For the Communists, war is a continuation of policy and vice versa. The Soviets have but one combined command over political, economic, psychological, and military strategy. The product is a centralized, coordinated front. The war this combined command is directing is a war to the hilt. As a means to this end; "cold" war is only a part of the game.

And I wonder how frequently we pause to realize that for some years now, this sometimes hot, sometimes cold war has been waged on free world territory—and what is more—that it continues to be waged on the territory of the free world.

Contrary to the illusions so many of us have harbored since the close of World War II, what we have been living through, can hardly, I think, be called peace. I'll go along with the idea that it's in a state of very "shaky" peace that we've for some years lived with the Soviets. But, we've seemed unduly ready to overlook

such local wars as that of Korea and other uprisings in distant places.

It was probably only natural, in our abhorrence of war, and desire for peace, that we grasped for the phrase "cold" war when it was first suggested as a characterization of the troubles through which we and the rest of the world were passing.

But, we may be sure that our Communist opponents do not share this view—for in their minds, the so-called cold war is merely a part of their deliberate total war to the bitter end.

Ever since the Communist tyranny went on the march, its operations have been marked by a grim determination to gain power—and this, through proficiency in the study and exploitation of weakness of the potential victims of the Soviet's expansionist program. And it's equally important not to overlook the mentality of those who direct the thoughts and actions of militant communism.

Today sees the world in a continued struggle between believers, regardless of faith, and those who would deny the soul and its relation to God. It is to overrun and subdue mankind that the imperialist-minded oligarchy in the Kremlin is exploiting this Godless faith.

The conflict between atheist communism and religion may be summed up as a battle between hate and love, between egoism and social justice, between tyranny and freedom.

#### **Moral suasion has no impact on the irreligious**

Moscow's most recent blast against religion is a charge that belief in God is a basis for superstition—that only the gullible believe in God. This indeed is further evidence that in the struggle for men's minds, communism, as a totalitarian and materialistic philosophy, just cannot tolerate competition with spiritual force.

Now it's my conviction that, tied in very closely with the belief in God, is the honoring of solemn undertakings between men of good will. It follows, then, that we could hardly look to the Godless to fulfill their engagements—unless, of course, there were established the necessary systems of inspection and control, and unless we possessed the will and the military capability to back up these systems.

Then, too, ours was a hard experience in dealing with Stalin. How, therefore, should we expect to fare any better with his survivors, whose chief claim to significance, at the time they took over, was, in effect, to turn "state's evidence" against their former partners in misdeeds against God and humanity.

The realistic answer is that moral suasion has no impact upon the unscrupulous—that the only deterrent is strength, which entails armed force, and the will as well as the capability to use it, if need be.

This, indeed, is essential in order to keep the confidence of our Allies, as well as to command the respect of our potential enemies. It is essential in order to back up our diplomats in their delicate negotiations.

In measuring the effectiveness of our diplomacy, in forwarding our foreign policy, we have only to evaluate the response of the free and noncommitted nations, to our established policies, under trying circumstances. We may be sure that their reactions to our policies, insofar as these concern their interests, mirror a shrewd appraisal of our capabilities, and mood to back up these policies in a showdown. Any wavering, on their part, would reflect their lack of confidence.

#### **The measure of our capabilities and determination**

I saw a clear example of this in the years leading up to the outbreak of World War II. Anytime a country in Eastern or Central Europe failed to respond to Britain's and France's "Stop Hitler" policy, it meant that, in the realistic appraisal of that country, the major nations of Western Europe were not yet of the mood, or of the state of military preparedness to support their policy with the requisite effective punch. It furthermore indicated that that country doubted whether, if it came to grips with Hitler, the West would consider it the cause for which Democracy should march. In short, all I had to do, to measure the state of Western Europe's preparedness, was to watch the reaction of the states in Eastern and Central Europe to Nazi pressure.

And this brings me to our own position.

We have, as you know, military alliances with some forty-eight nations.

It's impossible to foresee when these ominous sight bills might be handed us for payment. And, it's equally impossible to forecast the form or scope of performance these commitments might demand of us.

One thing is certain: The growing tensions in several widely separated critical areas of the world point up the importance of realistically relating our capabilities to our commitments, as well as to our own political, economic, psychological, and military objectives.

If, then, in the course of weighing this question, the conclusion was reached that saturation in nuclear potential, on both sides, might lead to a greater likelihood of limited war, consideration would necessarily be given the capability of coping with more than one limited engagement at the same time—probably in widely separated and relatively inaccessible places. For the potential enemy would be apt to try to stretch our capabilities to the maximum.

#### **The need for a broad selection of military means**

Yet, even in event that such a conclusion were reached, our capability of fighting total war with every weapon, would, nevertheless, have to be in the wings.

And—what's more—it's essential that we make it clear to all that we wouldn't hesitate to resort to our big weapons, if need be. For, as you know, the Soviets have a preponderance over the free world in conventional weapons. And I have long attached great significance to the fact that, at the same time the Soviets have been hurrying to improve their nuclear potential

—they have also been modernizing and further strengthening their conventional forces. Moreover, we may count upon it that they are not undertaking this double burden just to gaze into the free world's blue eyes.

No doubt, their actions reflect some fairly subtle speculation. Already we've seen evidences of their efforts to rally world opinion behind a move to abolish nuclear weapons. This would, of course, remove an effective factor from the West's war deterrent, and unblock the Soviet's conventional forces presently checkmated by the nuclear stalemate. It is these considerations that point up the importance of our military authorities being afforded a broad selection of military means to deal effectively with the flexibility of the Soviet military potential.

It is well to bear in mind, moreover, that in pursuing its ends, Soviet strategy counts upon the free world peoples' so wearying under the constant threat of war, that they will resort even to the false bargaining of appeasement. So it is, that while constantly keeping alive the threat of war, Moscow announces from time to time its terms for the removal of the threat.

In all likelihood, the men in the Kremlin might hope to achieve their diabolic purposes through something tantamount to surrender. At the same time, we must remain on guard lest a fanatic, such as Khrushchev, might, if ever allowed to think he could do so, without risking his country's suicide, resort to the force of arms.

#### **Armed power backed up by all our resources**

In waging the cause of freedom for the capture of men's minds, we must be prepared to defend ourselves in the new forms of so-called cold-war techniques, whether they be propaganda, psychological, or subversive attack. But these unconventional weapons will not be successful without the backing of armed power. Armed power is at the core of a nation's protective shield. It may never be used, but we must have it up our sleeves.

In our tried and proven democracy, the role of armed power is not an end in itself—but rather, a recognizedly necessary means to several constructive ends; namely, to keep the peace—shaky as it is—and eventually to achieve an enduring peace, consonant with our indestructible faith in freedom under the guidance of God.

Meanwhile, we should never overlook the fact, in our preoccupation with the troubles of the moment, that our Nation has the resources, the technical skills, the scientific knowledge, the creative imagination, to get the essential job done—and that our people have proven themselves equal to every demand which has ever been placed upon them.

Indeed, there are no challenges the future may hold in store for us, which we cannot master, provided, so long as the threat of militant communism remains, we will oppose it with energy, wisdom, and determination. I am confident our people will so decide.

# Predicting Performance in Battle

COLONEL A. L. RANSONE

**D**OUGHBOYS of the 5th Cavalry and 35th Infantry regiments figured in a Korean action whose final impact will be felt very soon throughout the Army. Between May and July 1951, these combat-weary soldiers were assembled in groups of 250, to be besieged with a familiar but unexpected onslaught: hundreds of psychological test questions. To these many queries, posed by The Adjutant General's research psychologists, they obligingly wrote their answers. Next, they demonstrated their physical endurance, their throwing accuracy, and peered through stereoscopic viewers to show the psychologists how well they could see under simulated daylight, twilight, and darkness of night.

These operations were part of the first full-scale personnel selection research study conducted close to the scene of battle. The test performance of these troops, measured in the aftermath of battle and in the anticipation of further combat, was to figure in a breakthrough to widespread improvements in the way the Army would pick its combat soldiers in later years.

For more and more Army assignments, personnel selection is scientific selection. Each soldier is earmarked for assignment on the bases of what he can best do for the Army and of what the Army needs at the time.

## How will a soldier perform?

The classification tests given at reception stations, especially when used two or three at a time, can tell how well a new soldier is likely to perform in such jobs as auto mechanic, clerk, electronic technician, and many others with obvious civilian counterparts.

But the Army had less of a civilian precedent to follow when it had to pick men for jobs which may have required them to close with an enemy in hand-to-hand fighting. During the Korean conflict, the test combinations used for combat-arms assignment—although the best available in terms of existing research knowledge—were mainly combinations of the same group of tests used for training men for and assigning them to technical and support types of jobs. These

tests could provide a fair guarantee that a man had enough aptitude to master the *skills* of fighting.

Observations during World War II and Korea made it increasingly apparent that combat success depends in large part upon whether or not a man will use the combat skills he has acquired through training. For example, in evaluating good and poor squad members during the Korean conflict, many squad leaders, when pressed, agreed their units would have been better off without certain men—not necessarily because those men lacked knowledge or skills, but frequently because of adverse reactions to combat itself. Here are some typical descriptions of poor squad members:

- Wouldn't allow machine gun to fire at enemy because he was afraid it would bring mortar fire.
- When attack was supposed to come off, he "accidentally" shot himself through hand.
- You could never depend on where he would be in combat.
- Taking hill once, he went from front to rear of column. Two other occasions he bugged out—last time didn't see him for two days.

Ever since World War II, an important part of The Adjutant General's research mission has been the improvement of methods for picking men for assignment to various branches. A large staff of research psychologists aids in carrying out this mission, using the same basic approach that their colleagues in industry use to select better foremen, more efficient telephone linemen, or more productive insurance salesmen.

- ¶ First they define the essential job requirements.
- ¶ Then they fit experimental tests to the requirements.
- ¶ Next they check out the tests (make sure they work).
- ¶ Finally they select personnel with the aid of tests.

## Defining combat requirements

Even before Korea, research psychologists of the Personnel Research Branch talked to a cross-section of World War II fighters—officers, noncommissioned officers, and other ranks—to determine the requirements for successful combat. They read detailed histories of engagements, paying particular attention to individual exploits, both good and bad. They familiarized themselves with what other psychologists had written about the reactions of people to stress, danger, and the threat of sudden death. In short, they studied the business of combat from every possible angle as it was likely to

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Colonel Alex L. Ransone, AGC, was commissioned from ROTC in 1940, during World War II served with armored divisions and in the G1 Section of XVIII Airborne Corps, and was integrated into the Regular Army in 1946. After graduating from CGSC in 1953 he served in the AG Section at SHAPE until 1956, and has since then been Chief, Personnel Research Branch, OTAG.



affect the individual soldier. When they were finished, they set out to formulate some hypotheses about things they considered important for a good combat man to have or to be. These theories served as guides for developing thousands of experimental combat test questions, which were field-tested in the arduous 1949 arctic maneuvers.

Thus by 1951 the stage had been set for TAG to use Korea to the advantage of personnel research. The purpose of the TAGO research was threefold: check out with first-hand observation just what was required for successful combat performance; try out various experimental testing devices based upon earlier study; and establish for later comparison the degree of combat competence demonstrated by several thousand infantrymen who had engaged in battle.

To determine combat effectiveness of the men studied, combat officers, noncommissioned officers and other ranks in Korea were told: "Assume you are a squad leader picking men from your squad to go with you into combat. Select the one to whom you would be most willing to trust your life if you had to depend upon him in actual combat." As a cross-check, this question was asked concerning each man studied: "How well did [the man you selected] do in combat?" A variorum of replies resulted, ranging from the very best thing that could be said about a man—"He was

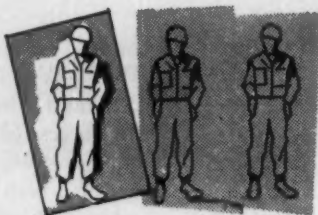
one of the very best men in the outfit"—to the other extreme—"He was not a combat soldier; his outfit would have been better off without him." (Noncommissioned officers placed about eight hundred men out of three regiments, or fifteen per cent, in the last category!)

In what ways did the adequate combat soldier differ from the inadequate? The TAGO psychologists found he was not the killer type, as the popular stereotype has it, but more likely the All-American type. He had good health. He liked rugged sports such as football. He was in no sense a bully, but neither did he allow others to push him around. He had an optimistic and wholesome attitude toward the Army and toward the problems of everyday life. He had a solid sense of responsibility. Among other things, this meant he could forget his own interests and needs when they conflicted with the needs and goals of his outfit. He would take orders willingly even under the most trying conditions, or would willingly step into the role of a leader when the situation demanded one. In short, in revealing those personal characteristics commonly recognized as important for success in many occupational endeavors. These descriptions of good and poor combat men based upon Korean combat experience are illustrative. (In 1953, the Human Resources Research Office [HumRRO] also sent a team of research scientists to Korea

**IN KOREA, THREE OUT OF TWENTY TURNED OUT TO BE VERY POOR IN COMBAT**



**HAD THE NEW SCREENING TESTS BEEN IN USE THEN, ONLY ONE OF THE THREE POOR COMBAT MEN WOULD HAVE SLIPPED THROUGH**





to study combat "fighters" and "nonfighters" with corresponding findings. Fighters differed from nonfighters in having greater leadership potential, more emotional stability, more "masculine toughness," a higher degree of social responsibility, and were on the average higher on over-all Army classification measures of general mental ability.)

#### Good

Would pull guard all night lots of times.  
Stayed up for two nights firing mortar.  
Enemy started throwing grenades at him; he stayed right with them and threw the grenades back.  
He was brave and didn't get nervous if mortar or other enemy fire came in on our position. He just went on with his job.  
When we'd get rounds on us, he'd keep on firing, wouldn't let it worry him.  
Never griped. Was always ready and willing. Didn't argue and would suggest things that slipped your mind.  
Would share anything he had with his buddies.

#### Poor

Fell out with ammo pack, not telling anyone he had ammo.  
Asleep on guard; demoralized whole squad; during his period on guard men wouldn't sleep, would insist on being awakened too.  
Never found him until the scrap died down.  
Worried about wife and kid—bad because on front lines should not have anything else on mind—will not want to get killed.  
Bugged out after he heard a few shots. Pretended he cracked up even though men up ahead had already taken hill.  
Supposed to carry two boxes of ammo for machine gun up hill, got up to sector where it was to be set up and found he hadn't come up. Suffered heavy casualties because machine gun ran out of ammo and couldn't cover us.

#### Fitting tests to requirements

Having determined the requirements of successful combat performance, the next step was to develop systematic means of using this information as a basis for selecting. A good way of determining whether a man is good on a job is to try him out and see how he does—if the employer can stand the time and expense. Tests are used to circumvent delay and waste, provided they can yield in advance an evaluation of a man's performance similar to that obtainable if he is actually tried out on the job. Unfortunately, tests already used successfully by others, even in similar conditions, do not always work out well in the intended situation. Then it is necessary for at least one sizable and typical group of potential employees to be put on the job and their performance studied in the light of their initial test records.

For combat selection there were no test precedents and no opportunity for follow-up. The AGO's research psychologists adopted a different plan. They used many experimental tests, based on studied requirements of combat assignment, on members of the 5th Cavalry and 35th Infantry Regiments. Concurrent with try-out

testing, they found out who were the good combat soldiers in Korea, the poor ones, and those in various in-between stages. Then they analyzed the differences in test scores in terms of differences in combat performance. These differences were the crucial results of the entire study, for then they were translated into new tests that could by all odds be successfully used for picking Futurarmy's fighting men.

One additional difficulty arose in setting up tests to select combat soldiers. Since the same soldier must fight and perform garrison duties, combat-arms selection tests had to be able to pick those who would do well both in combat and in garrison (including maneuvers). The availability of both combat and noncombat observations made possible a comparison of garrison-and-maneuver standards with combat standards. Would yardsticks of "estimated combat performance" bear any resemblance to those that predicted *actual* combat performance? From some timely side research, TAG's research psychologists were able to conclude that many aspects of personality important in combat are also important in garrison, and vice versa. The results had this important implication: certain aspects of estimated combat potential can be satisfactorily substituted for measurements of actual combat potential when building up combat teams in peacetime.

#### Checking out the tests

The task of checking out the new combat yardsticks was done in Washington, once the vast amount of research data had been accumulated. A new personality test and a new interest test emerged as the best additions to existing classification tests. For the personality test, the Korean outbreak had furnished opportunity for obtaining the desired indexes of combat success against which to gauge future combat potential, and for testing out the many theories on the several thousand infantrymen fighting in Korea with the 5th Cavalry and 35th Infantry. Detailed statistical analyses then determined which of these theories turned out best against the combat requirements. The test items corresponding to the best theories were then put together in a new, shorter test and scored for different combat groups to make sure the initial success was not accidental.

The questions finally appearing in this new personality test take a variety of familiar forms: multiple choice, like-indifferent-dislike, and yes-no—like those appearing in commercially available personality tests. Ready-made commercial personality tests, when used as recommended by their authors, proved not too helpful. The personality yardstick eventually adopted was tailored to meet Army needs by including only those questions which in a fairly real sense had separated the men from the boys in Korea. In the process, only 120 of the original group of more than one thousand personality test questions were found effective. This test will be used for spotting the best infantryman potential.

Evidence pointing to a strongly masculine interest pattern among good fighting men was so striking in

the Korean combat data that this particular idea was expanded into a whole new measure by itself. The new measure obtains an evaluation of masculine interests, especially in outdoor activities. As an interest measure, however, it works indirectly. The extent of masculine activity, and hence of masculine interest, is sampled through knowledge of the activity, care being taken in selecting questions that will rule out vicarious acquisition of that knowledge. This test will be earmarked for assigning men to combat branches other than infantry.

Since 1953, the new tests have been checked out thoroughly in training, in maneuvers-garrison assignment and, most important, in combat. As everyone knows, we have not been in combat since 1953. However, test scores and measurements of combat proficiency which had not figured in developing the new tests were still available from the original Korean combat studies. From this information it has been possible to compute the combat aptitude scores that many of the Korean combat soldiers would have made in 1951, had the tests been available then. Such scores have been compared with actual combat records of the soldiers concerned. These comparisons have shown that had these new yardsticks been in effect, 63 per cent of Korea's poor fighters could have been rejected for combat-arms assignment at the time of classification!

#### Payoff for combat selection

Research begun during the Korean conflict has now entered the payoff phase, for the new tests have not only been completed but are being incorporated within the existing classification structure during October 1958. The combinations chosen are composed of the tests which had been proved to be effective in combat research and of those tests which can enable the Army to meet its combat-arms manpower requirements in an optimal fashion. Both of the new test combinations optimally combine the requirements of combat skill and combat temperament. Both will be effective combat-arms selection devices for garrison and maneuver duty as well as for actual combat service. Finally, the new test classification combinations have made a good start toward insuring minimum competition from other training programs for the available pool of manpower. Men will be selected for combat-arms training and assignment because combat aptitudes are their *best* aptitudes and because that best will exceed prescribed minimum standards. Recruits whose best aptitudes lie in other areas will be assigned elsewhere.

For combat, it works this way:

(1) The new classification structure will provide a better matching between combat manpower requirements and manpower supply in terms of initial input (expressed in percentage):

	Supply Requirements	
Old structure	26	32
New structure	33	32

This means that under the old or current structure, only 26 per cent of initial input is shown to be best for combat, whereas 32 per cent is actually needed. Thus, 6 per cent of requirements must be met by taking some soldiers whose combat aptitude potential is only second-best. There is no such problem under the new structure.

(2) The new classification tests are more valid because they measure the requirements of both combat skills and personality traits. This fact, plus the better matching of supply and demand, as we have shown, will result in a decreased proportion of the nonfighter type earmarked in Korea and an increased proportion of outstanding fighters. If we consider, for example, a pool of one million men subject to initial classification, 320,000 would have to be identified for assignment to the combat arms. There would be provided, between the old and new tests, enough of an increase in the number of potentially outstanding fighters as to man the better part of a Pentomic division!

	No combat tests	Old tests	New tests	Improvement
Outstanding fighters	58,880	69,120	80,640	+11,520 (+16.7%)
Ordinary fighters	235,200	230,080	224,000	-6,080 (-2.6%)
Nonfighters	25,920	20,800	15,360	-5,440 (-26.2%)

The breakthrough to fighter identification is properly regarded as only a beginning. Other tests suitable for the Army classification system are already emerging from continued research effort as potential improvements over the new ones. Nor are tests the only technique available. Just recently, TAGO research psychologists have substantiated through rigorous research what has long been suspected: that a basic recruit's peers and immediate superiors can see enough in five weeks to very accurately appraise his potential worth as a fighter. Also, work is being done to develop a more refined system of allocating recruits to combat arms and to supporting services to make more certain that the combat branches will not be short-changed on manpower capability or quality.

Despite the emphasis I have placed on identification procedures, I do not wish to leave the impression that identification of potential fighters is the last word in putting together an effective fighting machine; however good the identification, the recruit does not become a soldier until he is thoroughly trained. But one big advantage of proper identification for combat assignment is gained in the head start provided the training process if all recruits have proper combat aptitudes backed by suitable combat temperament.

These research accomplishments as well as further research plans are all-important examples of what can truly be called scientific military management. So long as we must use ground troops in armed conflict, the advances I have described can be depended upon to add up to a preparedness not likely to become passé even in the missile era.

RADC RASC  
TADC FSCC  
ASOC TOC  
DLOC ADSOC

## ALPHABET SOUP, ANYONE?

COLONEL GORDON A. MOON, II

**T**HE use of the catchword or the clever phrase has long been accepted as an effective means of attracting the eye of the potential customer toward a product. We in the Army seem to be employing the same gimmick, knowingly or unknowingly, through the use of the sometimes mysterious but would-be dynamic abbreviation.

Frequently this military eye-catcher or mnemonic takes the form of four or five capitalized letters, the last of which most often stands for Center. It would be laborious to tabulate all the Centers that form a part of current military agglutination; it is probably equally difficult to determine when or how the whole business started.

Without delving deeply into history, most of us remember the birth of the FSCC (Fire Support Coordination Center) when it was cooked up shortly after World War II. Basically there *was* an idea behind the FSCC, which is more than can be said for some of the recently concocted favorites. The original idea was that FSCC would define a function which, it was felt, could best be performed by the artillery officer at the artillery command post. However, after a long and interesting tug of war between artillerymen and officers of the other combat arms, it was decided that the function visualized for the FSCC was legitimate, but that it could best be performed at the division or corps command post rather than at the artillery focus of control. The merits of the opposing arguments are not germane to our discussion, but the important point is that the term FSCC sur-

vived, and is an accepted—if not always fully understood—part of our vocabulary.

### Everything is a Center

The FSCC was not an absolute genesis. We could go somewhat farther back and pick up the FDC (Fire Direction Center), which is nothing more than the guts of the artillery command post. But the FSCC seemed to signal the beginning of a plethora of Centers of one type or another. You might say the FSCC spawned a veritable Jukes family of descendants. To name a few, we have TOC (Tactical Operations Center), TSC (Tactical Support Center), TAOC (The Army Operations Center) with its Air Force cousin ASOC (Air Support Operations Center), RAD Center (Radiological Center), RASCC (Rear Area Security Control Center), DLOC (Division Logistics Operations Center), DLCC (Division Logistics Coordination Center), and the unborn-but-already-named ADSOC (Administrative Support Operations Center). Not all of these alphabetical siblings have been accepted into the polite society of proper military terminology. However, they rear their ugly heads in ever-increasing numbers, and indicate a trend in military thinking which bears further examination.

All our alphabetical Centers have one disturbing and common trait: they cut across, compromise and confuse functions and responsibilities which normally are charged to various members of the general or special staff.

### Wheels within wheels

Take TAOC (The Army Operations Center), for example. Without going into all its ramifications, TAOC is headed by a "director section" consisting essentially of G2 and G3. Since a Center cannot have two bosses, G3 is recognized as its titular head. This immediately fouls up the traditional general staff relationship by subordinating G2 to G3.

**Colonel Gordon A. Moon, II**, Artillery, a graduate of Alabama Polytechnic Institute, was integrated into the Regular Army in 1942, and commanded the 4th FA Battalion in the South Pacific during World War II. After a tour on the faculty of the Command and General Staff College he is now on duty in Korea.



Another interesting example of disorganization was the proposed TSC, which placed the artillery officer in the dominant role in an artificial Center, where, among other activities, he was responsible for coordinating elements of the G3 section. Under traditional staff relationships, members of the general staff would have been concerned with the job of coordinating the artillery officer's activities along with those of other special staff officers.

The RAD Center comes close to a practical example of Roger North's expression "wheels within wheels," since for all practical purposes it is a radiological survey element with The Army Operations Center (TAOC).

#### **Strip away alphabetical camouflage**

It does not take any great brain or organizational inspiration to realize that if we strip away the alpha-

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**O**VERUSE of abbreviations is not new. The April 1947 issue of *Infantry Journal* reported:

#### **Tu M'ny Abbr'v't'ons**

Like many a busy government executive and Army or Navy officer, Secretary of Navy Forrestal finally had enough. He told his Navy to be careful of its abbreviations.

The story of the Secretary's complaint and his directive to lay off is told in the Bureau of Naval Personnel Information Bulletin's *All Hands* magazine, which headed its story:

ATTN: YR ABBR'V'ONS R TUMUCH

The remedy, directed by "SecNav" is simple: use only authorized abbreviations; if you aren't sure the people you are addressing will know what you mean spell it out the first time you use it and put the abbreviation in parenthesis immediately following.

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betical camouflage, the same old general and special staff elements and functions are revealed in all their naked, embarrassed—but still splendid—glory. The traditional staff concept has always proved itself a workable and flexible means of getting a job done in an orderly manner. All the functions visualized under new, distracting and abbreviated gobbledygook can be performed *with our existing staff organization*, without creating new gimmicks which supposedly provide the "implementation." Changes that may well be required in TOE are not unusual or difficult. We have always kept our TOE abreast of changes in concept and tactics. It may be that more detailed SOPs are required to more clearly define working relationships. Undoubtedly, field manuals will need constant revision in order to conform to improved staff-coordination ideas and tactical developments as they occur. But perhaps approaching

the problem in this manner is reactionary—or is it too straightforward and simple?

#### **Change for change's sake**

Calling a staff activity or a group of staff activities a Center does not really accomplish anything new or startling. Additional spaces for implementing these concepts are rarely authorized. Sometimes new equipment is provided, but this could be given with equal facility to the appropriate staff section. Apparently the old term "command post" is not glamorous enough. With all the hoorah and drum-beating, about all the Center actually does is define a certain grouping and operating procedure for part of the command post. This procedure highly justifies the accusation that it is change for change's sake.

It appears that in our stampede to be "forward looking" and to catch up with the nuclear age we have booby-trapped ourselves into the idea that everything which smacks of World War II and earlier is *bad*, and that it must be expunged from our doctrine forthwith in favor of "further improvements," whatever they may be. We must not push the panic button and jump into the Wild Blue Yonder without first carefully checking to be sure our plane is afire. I do not mean we should defend hidebound ideas, but rather that we keep the problem in proper perspective. Changes are urgently required in our concepts, tactics and techniques to keep abreast of the stupendous impact of potential nuclear warfare. We are impelled to develop and modernize our equipment with all possible speed. Our units have already been reorganized, perhaps too hastily, but at least some sort of change may have been required. But our general and special staff concept is only a tool with which to do a job. It should and can work, regardless of the type of task to be performed.

#### **Back to balance and reason**

Perhaps what we have here interpreted as unintentional conflict with general and special staff functions in the trend toward bigger and better Centers is actually a turning movement or attempted envelopment of what we consider a strongly entrenched position. If this be true, let the advocates of TOC and ADSOC begin to call a spade by its common name and stop muddying the water by disguising a bisectational British-type staff with semantic skulduggery!

Let's leave the fancy abbreviations and catch phrases to Madison Avenue. The time has come to dispense with toothpaste salesmanship and lip service to forward thinking and to get our GI boots back in the good old earth of balance and reason. There is no easy solution to the complex problem of how best to staff and coordinate the hard-hitting, flexible Futurarmy. One thing is certain: the solution does *not* lie in the creation of a new agency or organization with each shift of the wind. At this stage of the game it is essential that we have a good sense to avoid confusing *ourselves!*





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BOQ and enlisted military quarters are available to military personnel. Persons desiring such quarters should submit requests by 8 October 1958 to: Headquarters, Military District of Washington, Att: Billeting Officer, Washington 25, D. C.

## ADVANCE REGISTRATION INFORMATION

**Members of AUSA may register in advance** for the Annual Meeting between the dates of 10 August and 10 October.

Requests for advance registration will be accepted from **MEMBERS ONLY**.

AUSA cannot accept requests for hotel or military billet reservations. See opposite page for instructions regarding billeting requests.

The prices for registration and tickets to the social functions are listed on the coupon at the bottom of the page. Military personnel and Department of Defense civilians are eligible to register and purchase tickets to the social functions at the military rate.

Registrants may bring guests, including ladies, to the luncheon on 21 October and to the annual banquet on 22 October.

Registrants may NOT bring guests to the reception on 20 October. **All tickets purchased for guests will be sold at the civilian rate.**

Advance registration and ticket purchases will be confirmed by mail. Registration badges, tickets, and other materials may be picked up at the AUSA Registration Desk in the lobby of the Sheraton-Park Hotel after 1200 hrs., 19 October 1958.

Refunds cannot be made for advance registration and advance ticket purchases unless the cancellation is received prior to 19 October.

Please indicate on the coupon below the category of your registration and the number of tickets desired for each event. Full payment for your registration and tickets requested must accompany your advance registration application. Checks should be made payable to the Association of the U. S. Army. **Remember, tickets for guests are sold at the civilian rate.**

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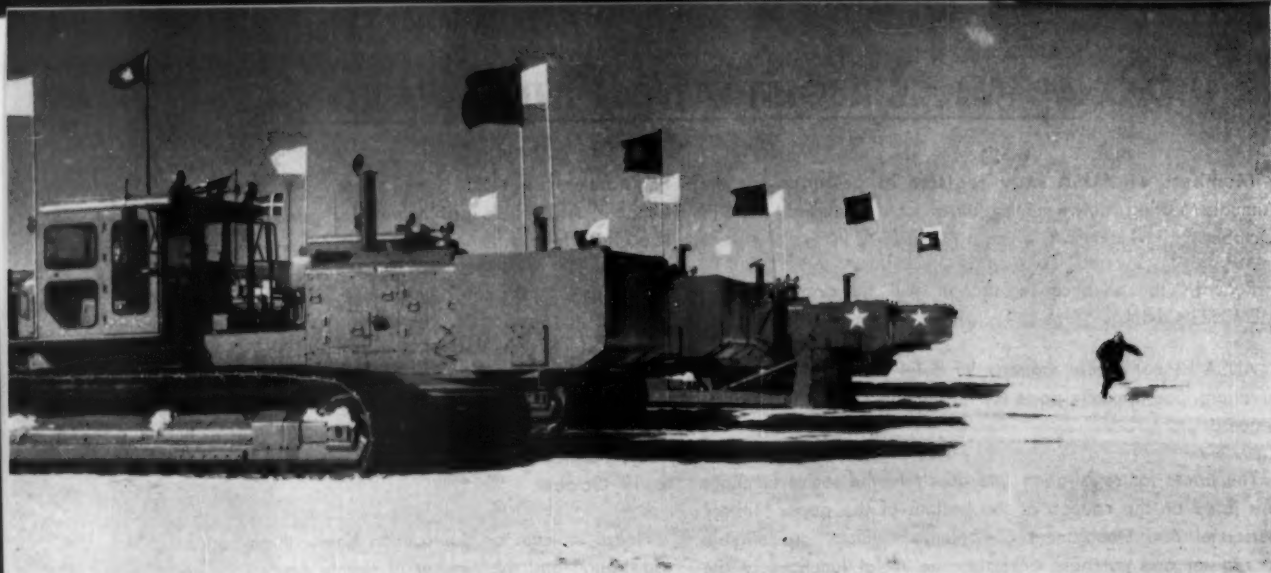
Function	Quantity Desired	Unit Price		Amount
		Mil.*	Civ.	
Registration	_____	\$1.00	\$ 3.00	_____
Reception	_____	2.50	3.50	_____
Luncheon	_____	4.00	5.00	_____
Banquet	_____	7.50	10.00	_____
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\*Includes Department of Defense civilians.

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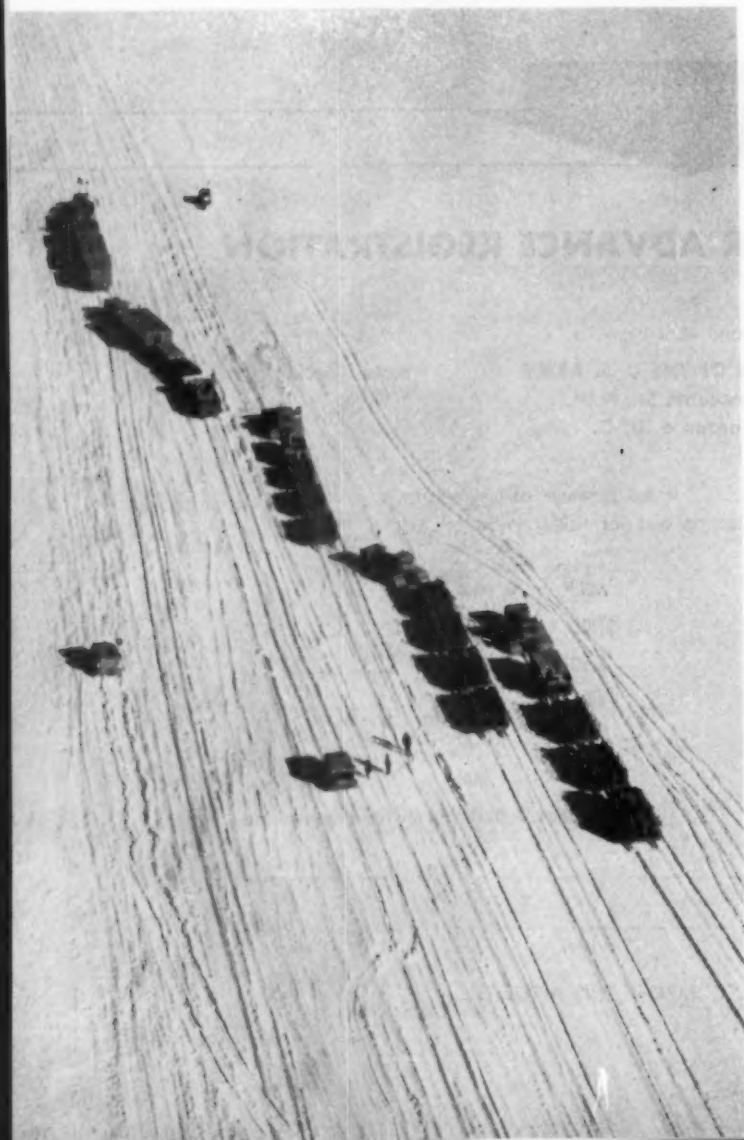
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FULL PAYMENT MUST ACCOMPANY THIS APPLICATION



With banners waving "Lead Dog's" lead train lines up for the journey across unmarked Greenland ice cap

Aerial view of the five sled-trains as they depart from Camp Tuto



## Army Expedition Breaks New Trail Over Greenland Ice Cap

LEAD DOG, the most ambitious sled-train operation of the Army's Transportation Environmental Operations Group, made a three-week exploration of the frozen wastes of Northwest Greenland this summer.

Commanded by Lieutenant Cecil L. Puckette, the expedition was composed of five sled-trains, pulled by caterpillar tractors. The lead train consisted of four wanigans, similar to house-trailers mounted on sleds. These wanigans contained the power units, radio and navigation equipment, mess facilities, and sleeping quarters for the crew of thirty-five officers and men. The other four Cat tractors pulled trains of 10-ton capacity Otaco cargo-sleds, loaded with fuel, supplies, rations and trail-marking poles.

Lead Dog's mission was threefold: to plot and mark a new ice-cap trail for several hundred miles; to establish caches of fuel and supplies along the route to aid future ground and aviation exploration in the area; and to test and evaluate the latest electronic aids for polar navigation.



# TEST

# EVALUATION

## —the King Cole (CPX-FTX) experience

**BRIGADIER GENERAL JOHN A. BERRY  
AND COLONEL THEODORE C. MATAXIS**

**E**XERCISES such as Follow Me, Sage Brush and Bluebolt attempted to determine the most effective organization, equipment and tactics for the atomic battlefield. The current Pentomic concept has further increased the importance and the need for field exercises, maneuvers and troop tests.

In the spring of 1957, Exercise King Cole, involving approximately 25,000 troops, was held in Louisiana. An interesting feature of this combined command post and field training exercise (CPX-FTX) was the scheduling of four troop tests as a principal objective.

The first test concerned the tactical support center, a central agency through which the commander of an army or independent corps regulates and controls all his tactical support means. King Cole provided a frame-

work within which this concept was tested, to determine if through it a commander could better control his tactical support.

Second was a test of radiological fallout intelligence. During the exercise, units tested measures which could be used in combat to predict and monitor radiological fallout.

The third, a test of special demolitions, was designed to determine doctrine, methods and techniques of demolitions best suited to atomic conditions. Flexibility and speed were stressed in order to provide a means, responsive to the commander, which would greatly augment our capability for defensive operations.

Last was a test of guided missile and special weapons supply. This experiment attempted to arrive at a basic concept designed to speed the supply of ammunition and new weapons during combat. Speed is vital if units are to survive under the increased tempo of operations, when they are widely dispersed and have nuclear support.

To plan, supervise and appraise these tests, King Cole headquarters established a Test Evaluator Group (TEG) early in January 1957, approximately two and a half months before the exercise began. Besides the normal administrative difficulties associated with establishing a new headquarters, the Group faced the task of translating directives, changes and memos for record into a form which clearly outlined its responsibilities and requirements for the four tests.

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**Brigadier General John A. Berry, Jr.**, now on duty in the Far East, graduated from West Point in 1931 and during World War II was Executive Officer of XV Corps Artillery. He was on the Faculty of the Army War College and later its Secretary. During King Cole in 1957 General Berry was Chief Evaluator of troop tests, and recently served in that capacity during Exercise Strong Arm. **Colonel Theodore C. Mataxis**, Infantry, commanded a battalion in ETO during World War II and in Korea was executive and CO of the 17th Infantry (7th Division). Colonel Mataxis was General Berry's assistant during King Cole, and is now with the 8th Infantry Division in Germany. He wrote "Atomics is for Commanders" in our November 1956 issue.

Interpretation of data on the tests soon made it evident that the problems of the Evaluator Group were of two kinds: (1) those dealing with the development of joint tests and exercise control procedures and the mechanics of the testing; (2) those connected with gathering the data with which to answer the requirements established by CONARC.

It became clear that close coordination would be required between the maneuver director's staff and the Evaluator Group in developing methods for controlling the tests and the exercise. This close coordination was directed by higher headquarters in order that situations could be developed with utmost realism by injecting, at the lowest practicable level, messages reflecting a combat situation, and the necessity for unit controllers to assist, as an additional chore, in the evaluation of the execution.

#### **Controller-injected actions**

This directive resulted in initially devoting about three weeks to drafting controller-injected actions that would trigger the test situations required by the detailed plan. Only by inserting these actions could the Evaluator Group begin to develop and implement its own testing methods. The drafts were turned over to maneuver control headquarters for implementing and phasing throughout the whole maneuver play. During this period joint test-exercise control methods were developed for insuring that the requirements for test objectives would be met.

After establishing arrangements for coordination with the maneuver staff, TEG turned to its major task of developing testing methods. Because little guidance could be expected from higher headquarters, the Group had to explore a new and interesting field.

Fortunately, we had expert advice from CONARC's Combat Operations Research Group (CORC). Dr. Meals, Acting Director, and Mr. Hurden, also of CORC, visited exercise headquarters before the maneuver phase and outlined the principles that underlie a scientific approach to testing and evaluating. This assistance resulted in establishing a common background for members of the Evaluator Group, who were drawn from several arms and services at scattered posts.

Since tests came from different sources, it was to be expected that plans for each would differ. Further study made it evident that reconciliation of the different plans and the requirements laid down by proponents of the test would require a common approach for all four. Hence, an early task for TEG was the reconciliation of legitimate requirements of each testing group with a common testing method. This method must be consistent and administratively feasible, and must enable the exercise director to easily evaluate the results of final tests.

#### **Test objectives developed**

Study of directives and detailed plans for one test disclosed a very clear statement of objectives. These

objectives in turn were further divided into sub-objectives covering specific fields to be tested. This clarity of presentation led to its adoption by TEG for the rest of the tests.

This presentation initially isolated and clarified the general objective areas to be tested. Once the general areas were selected, they were divided into specific sub-areas which in turn outlined tests of sub-objective areas. This division and sub-division of the over-all directive pointed up the methods to be used in monitoring and controlling the preparation of the questionnaires used to collect the data.

Next came determination of the best method of gathering test information. Some factors to be considered were the dispersion of participants, capabilities of the controller system, speed of movement, and the small number of evaluators. Several plans were considered.

Although the interview is the best means for assembling otherwise unconnected details, for judging the attitude and state of training of players, and for searching out unexpected problem areas, it had to be abandoned because participants and controllers were widely dispersed and preoccupied. However, sometimes interviews were used for visitors and for those controllers available at the conclusion of the exercise.

Observation and measurement were also considered. Control stations for measuring and recording facts would supply the analyst with the most reliable data. This system too was discarded, because of the wide scope of activities encompassed by the tests, the lack of definitive standards of performance with which resulting data could be compared, and the shortage of evaluators to man the many control stations required. But through it we did gather some more important facts.

Lack of time for gathering information, the need for recorded opinion, the dispersion of players, and the short period between phases dictated the use of the questionnaire. The logical starting point was the sub-objective. Each question was keyed directly to a sub-objective which in turn was tied to an objective of the system or component under test. The resulting replies contributed directly to the preparation of certain sections of our final report.

#### **Three basic groups of questions**

After more study, it was decided to have three basic groups of questions whose answers would be classified as evaluative, comparative, or factual. These questions related directly to the experience and positions of participants.

The evaluative question was asked of senior officers—players as well as observers—and was carefully worded to consider their experience. If a reply was "marginal" or "ineffective," explanation was requested. Questions were so worded as to elicit, besides an evaluating rating, a short essay on doctrine, principle or organization. We realized that replies would be largely expressions of opinion, but we believed the officer's experience and

judgment would reflect seasoned and expert advice.

Comparative questions developed the information desired and were keyed directly to the evaluative query. These questions posed carefully worded comparisons of system performance, and were aimed at field officers and controllers-evaluators able to observe either operations as a whole or certain sequences of related functions. They compared the old and the new. After the rating came multiple-choice questions designed to isolate the sub-element of the system found deficient.

In the factual question the straight line of thought between objective, sub-objective, evaluative, and comparative queries was developed through a series of checks on performance. Replies called for recording of times, counts of items, and measurements of functions. These questions gathered facts regarding performance, and were asked of controllers-evaluators in a position to supply the details.

The data gathered from these factual questions were most valuable in cases where opinions derived from the evaluative and comparative questions proved inconclusive. They could be used to resolve, if at all possible, conflicts in favor of a conclusive statement, whether favorable or unfavorable.

The methods developed by TEG facilitated the rapid evaluation of pertinent data keyed to specific tests. First, the evaluative questions established a system which, through a simple tally, came up with an initial rating of effective, marginal, or ineffective. This tally, plus a scanning of the reasons for the "vote," allowed rapid initial evaluation. When tabulations leaned one way or the other, the reason was apparent.

Where the tabulation of an evaluative question was inconclusive analysis depended on the answers made to comparative and factual questions. It can be seen that comparative and factual questions were designed to further refine and tie down the rather general replies obtained by evaluative questions. Thus, each type of query complemented the others, and played its part in the final analysis and evaluation before preparing the finished report.

#### **Inconclusive findings**

Significant in the methods used during King Cole was the provision of inconclusive findings. Not always are things clearly white or black; sometimes they appear gray. It is important to remember this when testing. Inherent in TEG's system was a mechanism designed to reduce the number of inconclusive findings. The multiple-choice answers to comparative questions permitted the isolation of ineffective sub-system performance. The conclusion could then be drawn that the system itself needs correction when a specific sub-element is proved faulty.

Having tabulated its data and completed initial evaluation, the Group next considered the effect of contaminating factors (those which influence performance as a whole) which might affect the "pure" facts collected.

Besides carefully considering the effect of contaminating factors on test results, the background and inter-relationship of respondents were carefully documented and considered during final evaluation. For instance, before the exercise began, each controller supplied his professional history. Thus, when studying the answer to a controversial question, TEG considered this background.

In addition to classifying controllers, Test Evaluator Group analyzed the replies of respondents from the viewpoint of customer-supplier. This relationship often revealed bias. If the customers' or suppliers' answers to a particular question could be grouped by arm or service under conflicting views, the bias could then be carefully weighed while evaluating a reply. In such a situation answers to factual questions became important in further checking replies given to evaluative and comparative queries.

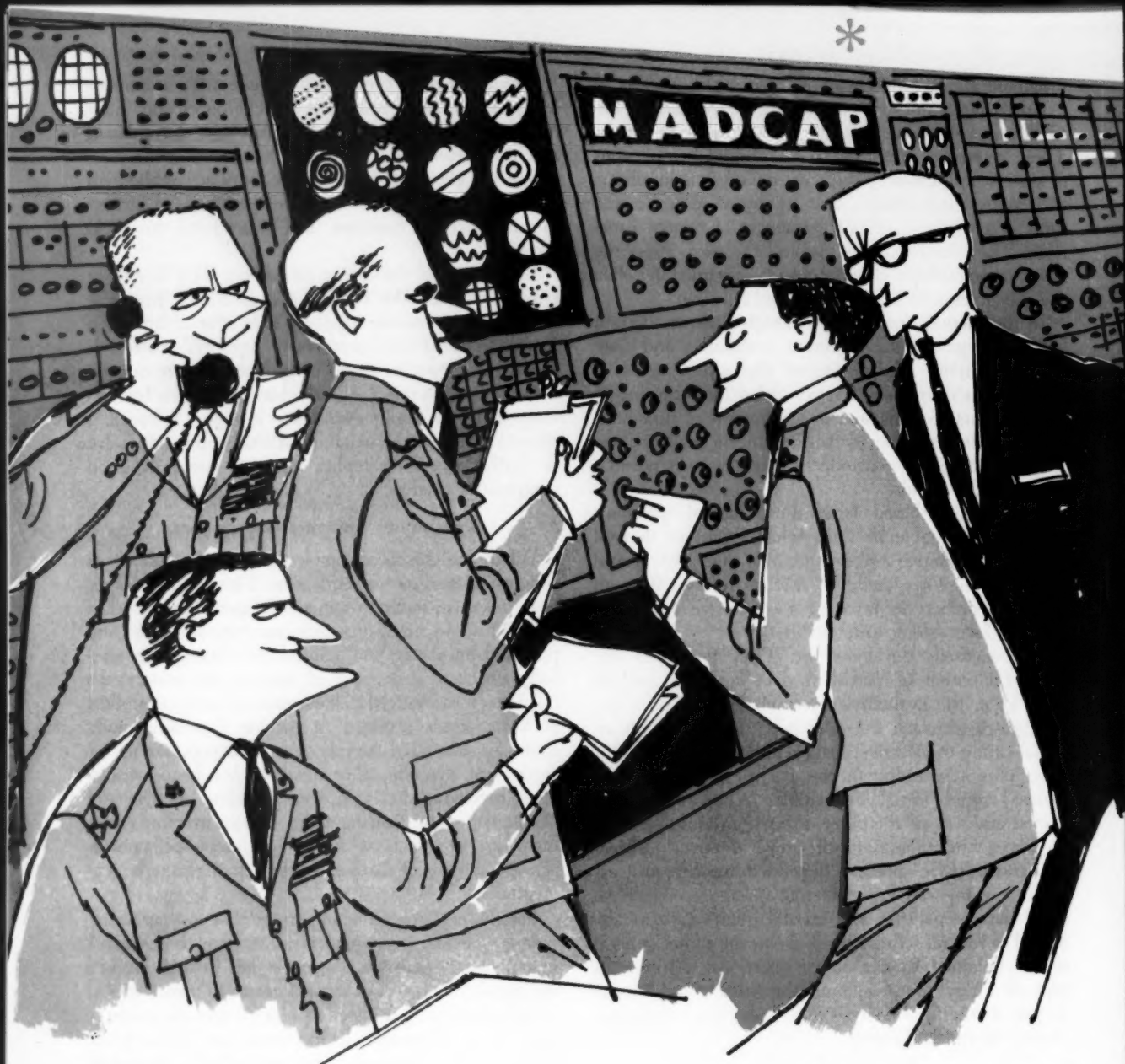
#### **Conclusions and recommendations**

When analyses were completed, TEG formulated its conclusions and recommendations. These outlined steps to be taken in order to remedy deficiencies uncovered by the test. In many instances recommendations were proposed by players and controllers. These were carefully checked and weighed against the maneuver's mission. It was noticed that commanders and controllers at lower levels inclined to believe that deficiencies could be corrected merely by adding personnel or equipment. On the other hand, higher headquarters, when reviewing the evaluation, considered budget and manpower costs. Bearing these factors in mind, they favor an approach which will correct deficiencies through improved methods rather than through augmentation.

For these reasons it is important that evaluative responses consider performance rather than shortages. A statement of performance must be further backed throughout the report by data expressed in mathematical terms, wherever possible, in order to provide concrete facts for consideration by reviewers at higher headquarters. Only when all factors are included in evaluation can a test report be considered complete for forwarding to higher headquarters, where recommendations for changes in organization, doctrine and equipment receive further study.

In the past we have had to rely on military history and operational reports for trends which influence future war. Today we must depend on wargaming, maneuvers and exercises, because we have not yet experienced the tactical use of nuclear weapons. This lack of experience upon which to base current organization points up the need for and importance of studying new concepts and doctrines being projected by CONARC and our service schools. These new ideas must be studied thoroughly, wargamed and field-tested as they develop. In view of the lack of historical examples from which to discern future trends, reports of exercises and maneuvers assume new importance.





# THE REAL PUSHBUTTON WAR

The mobilization of a modern industrial nation is a job of such magnitude that electronic computers will take over the job of deciding what's to be done

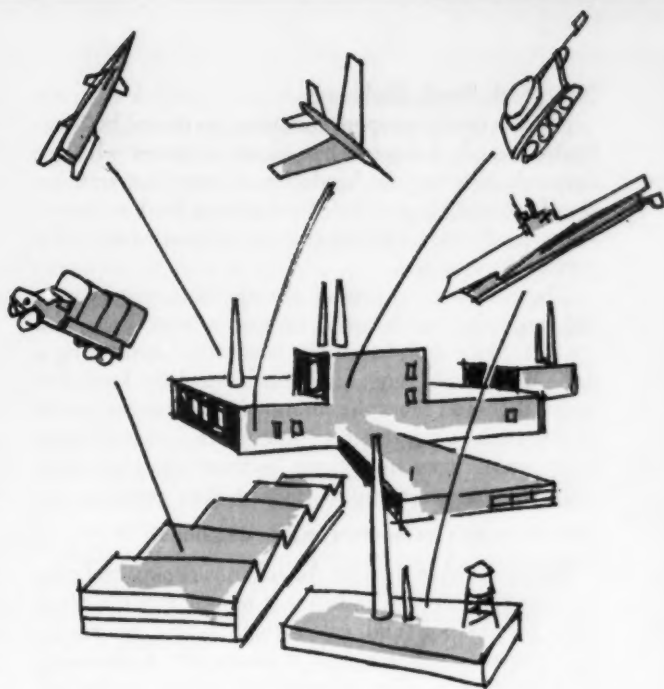
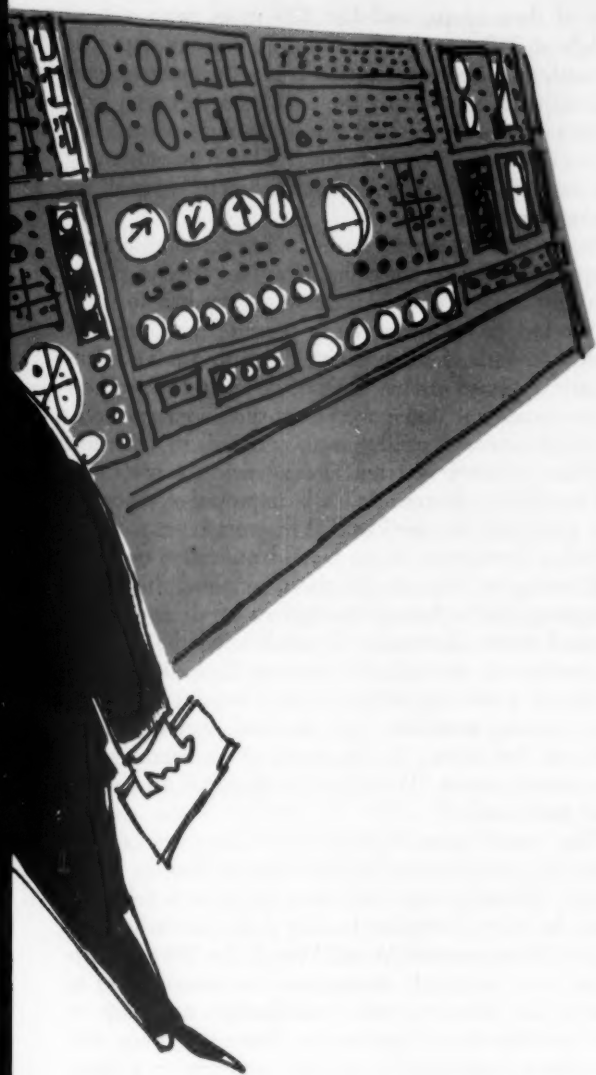


Mobilization Analyzer for Determination and Control of Allocations and Priorities

**MAX CARASSO**

ARMY





**A**RMCHAIR strategists and imaginative writers to the contrary, it is extremely unlikely that any future war will be fought entirely in the approved science-fiction manner, with a few men sitting at the controls of guided missiles.

Such a concept ignores the high degree of inflexibility and extreme vulnerability of big weapons. The crew of a 16-inch gun can't use it to fend off an attack by infiltrating infantry. The infiltrators can capture the gun and render it useless, or possibly even turn it against its former owners. Incidents from past wars illustrate this principle. "Impregnable" Fort Eben Emael in Belgium was seized by German foot soldiers who climbed under the noses of both the big guns and

the machine guns set up to protect them. Singapore's casemated guns pointing out to sea were helpless against Japanese columns approaching from its rear. Germany's own pushbutton war ended abruptly when the V2 launching sites at Peenemünde were bombed out.

But there is one aspect of war that will be almost completely mechanized or, rather, electronized: the mass of calculations and decisions required to mobilize and direct industry.

Here is where science-fiction will really take over. One giant electronic brain may possibly exercise the functions, responsibilities, and even the authority over allocations and priorities that required thousands of clerks, secretaries, mathematicians, statisticians, and military and civilian officials during the Second World War.

A large order, certainly, but the stage is being set by the increasing uses we find for electronic computers. A giant IBM 705 computer now centralizes all the operating data for the Canadian Pacific Railroad's sprawling empire, said to be the world's largest transportation complex. This computer locates eighty-thousand freight cars, tells whether they are full or empty, their current destinations, and where they will be needed next. As a sideline, it does most of the company's central accounting.

A Remington-Rand Univac at the New York Transit Authority calculates the daily revenue from all subway systems, all payroll figures including overtime, tax deductions, and union dues, and keeps track of more than a hundred thousand inventory items. In Wall Street, the state of the securities market can be determined by pushing a button on a Burroughs Datatron. This computer instantaneously digests and reduces to a single weighted index all the transactions taking place in the five hundred key stocks traded on the

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**Max Carasso**, economic consultant and theoretician (industrial development planning and foreign trade), is a civilian graduate (correspondence section) of the Industrial College of the Armed Forces, 1955-56. A resident of New York City, he has written articles for mercantile magazines.

New York Stock Exchange.

Erma, a special-purpose computer developed by Stanford Research Institute, has identical sisters who are currently relieving the headaches of many bankers. To do all the bookkeeping for fifty thousand bank accounts, Erma needs only nine clerks, in contrast to the fifty previously required.

These are only a few of the applications to which the more than a thousand computers now in service are put. Since each large-scale computer (one costing a million dollars or more) is estimated to have from five to ten thousand times the information-processing power of a human being, the more than three hundred large-scale models now in use can perform operations that would require as many as three million persons.

#### Can computers make decisions?

But to mobilize the vast American economy and convert into an effective instrument of war requires more than information and calculating ability, no matter how great. It requires daily a multitude of decisions. The question is: Can a computer, which is after all only a machine, make decisions?

A glance at a few applications will show it can. The Texas Corporation uses one of these computers to determine the optimum daily operations of its refineries. Using three groups of variables—crude runs available, hundreds of possible end-products, and the daily fluctuating prices—this computer supplies a satisfactory schedule in fifteen minutes. Since management obviously has no alternative but to follow this schedule, do you doubt that the computer *tells management what to do*?

But in practice the question of "can a computer make decisions?" is of only academic interest. With even a medium-speed printer a computer can supply five hundred feet of printed information per hour. Since no human mind could possibly evaluate such a flood of data, it follows that a computer must either make decisions or the mass of information it assembles will not be used at all.

#### Computers and industrial mobilization

Without computers, mobilization of the American economy for total war—the most formidable organizing and programming task ever faced by a human society—would be impossible. In this field, at least, we will have our pushbutton war.

Our armed forces are constantly aware of the complex and indivisible nature of defense. They pioneered the development of electronic computers, and today use more than half of those in the United States.

Some idea of the problem faced by our armed forces is suggested by the recent installation of a Bizmac at the Army's Ordnance Tank-Automotive Command in Detroit, to keep track of the spare-parts inventory required to keep that Command's one million pieces of mobile equipment in operation throughout the world. This giant computer, built by RCA, cost more than six million dollars. It covers twenty thousand square

feet of floor space, and has 220 units, with a total weight of 217 tons. By processing in minutes data that formerly required months, the computer makes it possible to reduce materially the \$2 billion inventory previously required to assure the availability of supplies whenever and wherever needed. This represents only one segment of the Defense establishment's over-all inventory problem.

In the past our armed forces had to accomplish such staggering jobs without computers. Not only in peacetime but during a world-wide war, they had to carry on the task of improving every piece of gear, together with thousands of components, down to a more scientifically designed screw. Without delaying the progress of governmental and government-sponsored research, every commercial catalog was scanned to ascertain whether industry was not already doing a particular job as well or better. As each improved component was produced, the services had to provide an accurate technical description, assign it an identification number, and catalog it. After all this there remained the job of comparing the technical descriptions of all newly catalogued items, thousands of which were the product of concurrent research, to remove duplications. Yet we found it amusing when identical bearings bore different catalog numbers. Our harassed planners might well ask their critics, in the words of a currently popular advertisement, "Would you be happy if your name were sarsaparilla?"

The armed forces acknowledge their share of mistakes and contributions to the sum of human inefficiency. Official publications are replete with self-criticism. An Army pamphlet frankly states that when the United States entered World War I, the War Department "was completely unprepared and unequipped to handle the vast economic mobilization necessary to place an American Expeditionary Force in France. But even more important it was also unaware to a large degree of the magnitude and complications of the task it was undertaking. By the end of 1917 the War Department was dangerously close to complete collapse in the field of logistics." We won that war in spite of our shortcomings, but the experience brought some understanding of the nature of total war, and of the importance of economic mobilization. After the war we took our first official recognition, as a nation, of the complexity of the processes that produce the sinews of modern war.

#### Steps in analysis

A step-by-step analysis makes it easier to comprehend the full magnitude of the problem, and the utter impossibility of attacking it effectively without the aid of computers. On a national scale, it can be visualized in four steps.

- First, a preliminary view of the problem of producing thousands of different end-items of military equipment. Some of these differ radically from their civilian counterparts, and many, like missiles, ma-

chine guns or chemical agents, may have no civilian counterparts. The preliminary picture must also include the necessity of converting some of our national industrial equipment to radically different uses, or, alternatively, of creating new equipment for these uses.

- All final products and spare parts will of course be required in quantities—in some cases fantastic quantities. Therefore the next step is to fill in the picture by multiplying these items by the thousands or millions of units required for each. This is complicated by the fact that the number of these requirements, in total war, is limited only by the quantity the economy can produce. At the same time, each item must be limited in accordance with its "relative essentiality." Actually, in wartime all priorities and allocations are directed toward solving this problem; that is, obtaining the maximum production from the economy, while at the same time keeping it in balance.
- The third step converts the picture into a three-dimensional one, by noting that each of the end-products results from a long and complex chain of production. In the case of aircraft, for example, even an extremely oversimplified diagram must first show various types of ores, fuels and other components entering into various smelting processes, then how each one diverges into various primary products. Iron would become alloy steel, carbon steel, and others; copper would become brass, bronze, and so on. These would then again diverge into various fabricated forms, in many cases converging into products requiring two or more of the original materials. While all these items would merge in the final assembly, the elementary and incomplete character of the diagram will be readily grasped by noting that many of the components and sub-components will be standard items which could enter into the assembly of other end-products as well as aircraft. Thus, even a simplified model threatens to assume unwieldy proportions.
- Finally we convert this static model into a working one by incorporating the time factor. Every item in the long and complex chain of production must be available at approximately the same time as all its complementary factors, and this time must closely coincide with the period when labor and equipment are available for processing these factors. If all the airplane's components were to arrive at the assembly plant only to wait weeks because the plant was already fully stocked, it might indicate that they had been unnecessarily expedited, possibly at the expense of products in more immediate demand. On the other hand, if all components failed to arrive in time, the available labor and facilities would be wasted.

#### Translation into figures

For those with a mathematical turn of mind, there

is a more definite visualization. Professor Wassily Leontief of Harvard, originator of input-output analysis, has said the American economic system is incapable of being expressed in terms of less than a hundred equations, with a hundred variables of each. Yet by using the remarkable input-output technique, this formidable mountain of data is reduced to workable terms. The story of this accomplishment, and its results, is an object lesson in the present inseparability of computers and defense.

Several years ago Professor Leontief prepared an "input-output grid" of the American economy for the Bureau of Labor Statistics and the Department of Defense. This grid is a gigantic table dividing the economy into 450 industry groups, and tracing the products of each group to their uses in the rest of the economy. Collection and evaluation of the necessary data required many months of research, but the job of translating it into the required end-figures was accomplished by Univac in only forty-eight hours. It has been estimated that it would have taken forty thousand man-hours on regular calculators (or the equivalent of twenty operators working a full year) to produce these end-figures. Thus the combination of electronic brains and interindustry analysis assures that in the next war our industrial effort will really be a pushbutton affair.

Needless to say, the knowledge gained through the grid, and the continued up-dating and analysis of those portions of it most important to defense, have been invaluable in identifying possible shortages and weak links in our productive system. These have been continuously corrected by encouraging, through various measures administered by the Office of Defense and Civilian Mobilization, the required types of industrial expansion.

#### Assessing damage to industry

Thanks to these and many other varied but coordinated measures, our defense planning no longer proceeds on the optimistic and probably fallacious assumption of an industrial capacity essentially immune (as in past wars) to damage by enemy action. Instead, it proceeds on the pessimistic, and more realistic, assumption that some—perhaps a good deal—of our productive, transport, and communication facilities will be damaged or destroyed. With the coming of M-day, which may be suddenly made known to us by mushroom clouds under which cities and factories stood minutes before, all the existing results of these multifarious preparations must be solidified into materials, methods and products to carry on the war. Here we encounter what may seem a basic contradiction.

Since the destruction may cut off some areas of economic segments from their usual sources of direction and coordination, we must plan to continue them as decentralized but still effective units. On the other hand, centralized direction, when available, will be more necessary than ever. There may be surviving



mines without smelters, smelters without mines; power plants without fuel, railroads without power; perhaps thousands of economic segments will be immobilized by being cut off from their complementary facilities.

In fact, the ability to maintain and restore centralized direction could well be the deciding factor in a conflict involving contenders with approximately equal resources. Here the computer, acting upon the facts obtained from interindustry analysis, will be all-important. For example, twenty thousand plants have been precisely located on the grid maps of probable target areas. This information, placed on tapes and fed into high-speed computers with early data following an attack, will make it possible to assess almost immediately the economic effects of reported damage. Input-output knowledge, also available on tapes, will indicate the best alternate circuits for the flow of economic processes cut off by damage. Ores and concentrates may need to be diverted to an intact smelter to replace a destroyed one, in the face of a complex of circumstances which may include a shortage of transportation, a crippling of power supply, and alternative demands from equally essential areas. While the human mind might collapse into impotence when required to make a quick decision beset with so many variables, an electronic computer, previously programmed to select the best possible combination among thousands of alternatives on the basis of several duly weighted considerations, can do a very creditable job. In effect, electronics has enabled us to escape not only the two-dimensional limits of pencil and paper, but even to transcend the three-dimensional limits imposed by the physical characteristics of punched cards.

#### Enter MADCAP

The calculating capacity of computers appears to be limited only by the practical limitations of physical size and this seems to be on the way to solution by the invention and development of extremely minute components. Nothing therefore stands in the way of our visualizing the giant computer, mentioned earlier, that could synchronize and centrally direct all U. S. industry. Though not yet extant, its progenitors, forerunners and component parts can be seen everywhere. Perhaps it might be called MADCAP (Mobilization Analyzer for Determination and Control of Allocations and Priorities) in tribute to the American spirit of enterprise and unorthodox ingenuity whose product it will be.

MADCAP embraces, at first glance, an enormous room, three of whose walls are studded with constantly flashing colored lights and are divided into many sections or panels of lights. Six persons face each panel. One, apparently in charge of the unit, sits at a desk on a platform, directly facing the center of the panel. In front of him, at a console at floor level so as not to obstruct the view of the panel, is an assistant. The assistant is flanked by two telephone switchboards, each of which is attended by two operators. The three walls,



Console of the IBM computer contains operating controls.

as a whole, constitute the Visual Rapid Feasibility Estimator, and the section now under observation is one of its components. There are more than a hundred such units in the room. The fourth wall, having no lights, is occupied by large and mysterious-looking components of MADCAP, before which is a large, glass-encased, soundproof platform. Because of the importance of a scheduled test, this platform is occupied by the full membership of the august Allocations and Priorities Board.

#### MADCAP at work

At the top of each panel, a sign flashes MAJOR FEASIBILITY TEST three times and then stays on.

The test involves a tentative, revised war plan developed by the Joint Chiefs of Staff—the logistics annex or table of requirements essential to the plan. In anticipation of an immediate emergency, D-day is assumed imminent or existing, and the plan to be implemented is therefore a short-range one, covering two years, subject to change in whole or in part as military necessities dictate.

The table of requirements specifies the items needed, when they will be needed, and the quantities needed during each period. When this lengthy table, in the form of magnetic tapes, is fed into MADCAP, strange things begin to happen, most of them invisible.

Let us say one item on the tape before being coded by MADCAP for its own internal processes, reads:

B-52 Jet Bombers, Standard Equipment	
1 January 1959 to 31 March	50 units
1 April to 30 June	100 units
1 July to 30 September	200 units
1 October to 31 December	300 units
1960, each quarter	300 units





From it monitor can keep an eye on status of the equipment.

Upon reading this item, known to computer operators as a "block," MADCAP searches its prodigious memory for an informational block relating to the item described: *B-52 bomber with standard equipment*. This block lists the major and standard components that make up a B-52 and its equipment. Such major components would consist of items like armorplate, body, wings, engines, radio equipment, bomb sights, guns, and the like. The block (we'll call it Block II to distinguish it from our original input, Block I) also tells the ton-miles of transportation required to bring components to place of assembly, as well as man-hours and the total chronological time required for assembling the plane. The information on the block is valid and current, kept so by means that will be described. Block II (uncoded) looks something like this:

B-52 Jet Bombers, Standard Equipment

Component	Catalog No.	Number or quantity required	Transportation ton-miles	Universal catalog
Armorplate	B5212	14 tons	2800	V2834
Body	B5213	1	650	
Wings	B5214	2	300	
Engines	B5215	2	1200	
Radios	B5216	2	30	V4963
Bomb sights	B5217	1	50	V8674
Guns	B5218	2	1500	V 645

Man-hours required for assembly: x hrs.  
Time required for assembly: x hrs.

Some items have universal catalog numbers, which means they are standard components for equipment other than B-52 bombers.

Now, making use of that special attribute of electronic computers—the ability to sequence operations

automatically without human intervention—MADCAP proceeds without hesitation to the next step. Taking each component item in Block II, it multiplies them by the number of items in Block I (an original input tape) for each period, accumulating the results for use in the next step.

The third step (MADCAP has been working only a few seconds while our human minds are already beginning to flounder) involves finding the block for each component specified in Block II. Let's leave MADCAP's inner workings to the engineers and technicians, and try to comprehend its procedures and objectives.

#### Procedures and objectives

During this phase MADCAP takes each component item, such as armorplate, and searches its memory for all data available on it. This includes, on the one hand, all data on requirements for producing armorplate, in terms of raw materials, supplies, labor, and the like. On the other hand, its memory provides data on how much armorplate can be produced quarterly, and how this production has so far been allocated among the various priority groups, for each quarter of the next two years.

MADCAP proceeds to do the same for each component of armorplate, such as iron ore, coal, limestone, labor, transport. Again, with each of these, it will analyze all components. For example, it will take account of the steel used in coal-mining equipment, as well as electric power or fuel to run it.

MADCAP examines each cycle of our vast and complex productive system—not of course, to its ultimate conclusion, but to practical limits previously established. During the past these practical limits were established by rule of thumb. For example, during World War II every publisher was allowed at least two tons of paper monthly, because it seemed impracticable to keep track of a smaller quantity. In future emergencies, of course, these limits may be determined more precisely, again with the aid of computers. Limits will of course vary with the nature of the material concerned. In the case of a strategic material like beryllium, which has no acceptable substitute, it might well be that close to one hundred per cent of supply would need to be accounted for. Therefore MADCAP pursues every last ounce throughout our economy to its ultimate destination. On the other hand, a material like paper, with many varied civilian and military uses, receives different treatment. Though controlled and allocated like everything else, a certain amount of waste-age and relatively unessential use must be considered.

In fact paper, along with metals, and similar partially recoverable materials, might be considered part of a peculiar group in which the control of scrap might be just as important, and in some cases more important, than control of the original product. This means that MADCAP's job does not end with controlling materials to their so-called end uses, but begins all over again

to keep track of each end use which points to available scrap, and then recycles the products of this scrap through the entire economic system in a sort of endless chain.

#### The feasibility test

In order to understand how all this is physically possible, let us return to our original input tape, containing the table of requirements. If this table listed one or two thousand items, all the data in connection with them would fit comfortably on one 2,400-foot reel of magnetic tape, which MADCAP would read in less than four minutes. But remember that unlike the average person's mathematical functioning, MADCAP's operational capacity is not limited to one thing at a time. The time required to read a thousand blocks of information could be further reduced to four-tenths of a minute simply by dividing the data into ten tapes, all of which MADCAP can read at one time as easily as it can read one. Or a feasibility test comprising ten thousand or twenty thousand items, on ten tapes, could be read in four minutes. In short, about four minutes is all that would be required to complete step one.

The next step, even though it involves hundreds of items instead of the few of step one, would still be done within the next four-minute period, since MADCAP can process simultaneously all the items in that sequence. But actually step two would take even less than four minutes, because its processing would follow instantly the detailed progress in step one, so as to be almost concurrent with it. The same would be true of all succeeding processes in all their ramifications.

The layout of the original panel of lights corresponds to that of the block on the magnetic tape, except that the figures do not appear there. Instead, prior to the great test, all lights were blue most of the time, with an occasional momentary change of one or more lights to another color. Such a change would be immediately followed by a little spurt of activity, a telephone conversation, some button-pushing, and a resumption of the blue color.

Now MADCAP has entered the third sequence, and the light in panel IIIa, second row, fourth column, flashes yellow. This means that having multiplied the amount of armorplate required for each B-52 by the number of bombers planned for each period, MADCAP is now signalling, through the visual rapid indicator, that the projected total requirement will exceed estimated capacity during the second quarter of 1959, and that this shortage will be felt in priority group D. This, it seems, is not serious, since the signal was yellow, indicating either that the armorplate for this priority group is not absolutely essential, or that an essential minimum had not been cut into. The officer in charge of the unit relays this information to the main platform, then instructs his assistant to check with Central the possibility of increasing production capacity. (This query, in turn, will call for a minor feasibility test.)

Concurrently with this little operation, thirty, fifty or a hundred similar ones have been going on. As we have seen, MADCAP, with no human limitations, did not need to await the results of one sequence before processing the others. In fact, it has processed armorplate, body, wings, and all the rest, simultaneously and, while we are still trying to gather our wits, has gone much farther. In the case of a complex piece of equipment like a radio, MADCAP has checked the availability of all sub-components, including tubes, transistors, wire, dials, and others. It has gone on to reduce these to the more elemental requirements of labor, power, transportation, minerals, machine tools, in preparation for still another sequence.

As the questions in the feasibility test flow through the vast circuitry, we begin to grasp the meaning of all those blinking lights. Those restful blue ones mean that production is going forward smoothly at full estimated capacity. That imperative red light is signalling a shortage or bottleneck requiring immediate attention. At another panel, purple lights, like overripe fruit, tell of unused capacity, surplus labor, or piled-up inventory, pleading that the overabundant item be promptly reallocated to more profitable uses.

#### The real thing

Now, to our horror, the play has become real. Cold war, suddenly and unexpectedly, has become hot war. In the security of MADCAP's deep underground home, we know this only through a jangling alert bell and the flashing blood-red message: *U. S. Attacked*. The why or wherefore does not concern the guardians of the panels. More than ever now, all their attention must be fixed on the messages their lights convey. Red lights flash everywhere. In the unemotional language of statistical shortages and lower capacities, they tell of factories destroyed, railroads cut, ships sunk; of thousands, perhaps millions, of American casualties.

MADCAP is ready for just such a day. From its circuitry comes the data, tantamount to commands, that will determine the railroads to be repaired, the ships to be reconditioned, the missiles and planes to be replaced, the populations to be evacuated. From this circuitry will come the data that will reunite our splintered economy, rejoin the broken links, guide our military planners in the use of retaliatory power, and guarantee its availability in the hour of need.

This is MADCAP, symbolic of our freedom and of our determination to defend it at any cost, so that it may never need to be true of us, as Hudson Maxim, that great inventor and staunch patriot, in 1915 feared: "Fate has decreed that our pride shall be humbled, and that we shall be bowed to the dust. We must first put on sackcloth, ashed in the embers of our burning homes. Perhaps, when we build anew on the fire-blackened desolation, our mood may be receptive of the knowledge that we must shield our homes with blood and brawn and iron."



# What's a Battle Group !?!

**MAJOR JAMES V. CHRISTY**

IN early 1957, when the organization of the Pentomic infantry division was announced, many infantrymen (and I was one of them) asked, "What's a battle group?" To commanders of World War II and Korea a unit of four rifle companies and a mortar battery looked more like a battalion than a regiment. The facts that it would be commanded by a colonel and that each company was considerably stronger in men and more powerful in firepower did little to alter our first impression. Although the Pentomic infantry division is more than a year old and the term *regiment* has been replaced by *battle group*, some Doubting Thomases still are unconvinced.

Our question can be best answered by carefully examining what the battle group can do. An unbiased comparison of its capabilities with those of the former battalion and regiment should once and for all overcome any prejudices caused by a perhaps unconscious sentimental attachment to the pre-Pentomic organization.

First, let's tabulate what may be considered the essential combat elements. Figure 1 lists only those elements of an infantry unit that will take an active part in a fire fight. The rifle company's four rifle platoons (with eleven-man squads) account for the superiority over the old-style units which had three platoons (with nine-man rifle squads). The caliber .50 machine gun is not listed for either type of unit since it is used primarily for vehicle or convoy protection and is not usually employed on the front line. Any apparent advantage gained by the 57mm recoilless rifle in the old-style units must be weighed against the fact it is not considered a primary antitank weapon. It is now

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**Major James V. Christy, Infantry**, is on duty with MAAG, Vietnam. He wrote "To March, to Shoot, and to Live Meanly," in our July issue.



obsolete, and the 60mm mortar is also on the way out. The battle group's 76mm guns are on the light tanks of the reconnaissance platoon. The 90mm guns were in the regiment's tank company; in the battle group they are the self-propelled pieces of the assault-gun platoon.

An examination of these armaments leaves no doubt that in potential combat power the battle group is far superior to the former battalion. In fact, the battle group owns almost as much hardware as did the regiment. The lack of tanks is more apparent than real, since one company of the division's tank battalion customarily is attached to the battle group. The diehards who mutter that this is not quite the same as having organic tanks are reminded that even before adopting the Pentomic structure we seriously considered removing the tank company from the infantry regiment.

So far we have considered only *potential* combat power, simply tabulating the amounts of firepower and manpower available to the commander of each type of unit. The *application* of this combat power on the battlefield has far more effect on the capability of the units than any mere counting of noses and weapons.

#### Regiment and battalion in defense

Now to examine the schematic appearance of each unit under what might be termed "normal" conditions for each system. While it has been said that in war nothing is normal, "average" would be a better word. Again, to simplify the comparison we will disregard administrative and logistical elements and base our discussion on the factors shown in Figure 1. In discussing assault strength we will use the rifle platoon as a unit; automatic weapons, antitank weapons and indirect fire

support will be mentioned only when their firepower is concerned.

Figure 2 shows the pre-Pentomic battalion and regiment in a schematic deployment for defense. The general formations and frontages were considered "normal" or "average" methods of deployment, so frequently described in the pre-Pentomic days as two-up-one-back. Of course, we realize that in practice wider or narrower frontages and varied formations were frequent. Nevertheless, the schematic appearance depicted in Figure 2 was the ideal field manual and service school solution.

#### Battle group in defense

Figure 3 shows the schematic appearance of the Pentomic battle group in three typical situations. Frontages and formations are by no means ideal, average or normal. These are simply typical conditions that could arise in deploying Pentomic units for position defense.



In comparing manpower, remember that the Pentomic platoon, with its eleven-man rifle squad, is slightly stronger than its predecessor. This is partly the reason for assigning a frontage of eight hundred yards as against six hundred. Certain other facts in these diagrams must be mentioned. First of all, only rifle platoons and companies are shown; tank units, organic or other, are not. In measuring "fire power in contact" only weapons organic to the unit being considered are listed, and then only when they or their effects could be considered available to front-line platoons. No attempt is made to consider factors bearing on mobility factors or outside combat support available. However, a good comparison can be obtained by examining three basic factors: manpower, firepower, and space occupied

**FIGURE 1. INFANTRY UNIT'S FIRE FIGHT FORCES**

PRE-PENTOMIC UNITS			PENTOMIC UNITS	
Co	Bn	Regt	Co	BG
81	243	729	132	528
			<b>Assault strength (soldiers in rifle squads only)</b>	
			<b>Ground Support Automatic Weapons:</b>	
18	54	162	24	110
6	26	81	8	45
			<b>Antitank Weapons:</b>	
3	9	27	0	0
3	19	80	12	64
0	6	18	2	8
0	0	0	0	2
0	0	22	0	4
			<b>Indirect-Fire Weapons:</b>	
3	9	27	0	0
0	6	18	3	13
0	0	12	0	8



**FIGURE 2. SCHEMATIC DEPLOYMENT OF PRE-PENTOMIC  
BATTALIONS AND REGIMENTS**

RIFLE PLATOONS			FIRE POWER IN CONTACT	
Front:	4	<div style="text-align: center;">2,400 yards</div>  <div style="text-align: center;">(A) Battalion in Defense</div>	<b>Automatic weapons:</b>	
1st Reserve:	2		Automatic rifles	24
2d Reserve:	3		Machine guns	16
			<b>Antitank weapons:</b>	
			3.5-in rocket launchers	6
			106mm recoilless rifles	6
			<b>Indirect-fire weapons:</b>	
			60mm mortars	6
			81mm mortars	6
Front:	8	<div style="text-align: center;">5,000 yards</div>  <div style="text-align: center;">(B) Regiment in Defense</div>	<b>Automatic weapons:</b>	
1st Reserve:	4		Automatic rifles	48
2d Reserve:	6		Machine guns	32
3d Reserve:	9		<b>Antitank weapons:</b>	
			3.5-in rocket launchers	12
			106mm recoilless rifles	12
			<b>Indirect-fire weapons:</b>	
			60mm mortars	12
			81mm mortars	12
			4.2-in mortars	12

or covered. One good reason for basing the comparison on these factors is that it is in precisely those areas that the battle group has been most criticized.

Starting with manpower, we see at once that the battalion would usually employ four platoons on the front line (Figure 2-A). Two are available as the first reserve for immediate use while three more in the reserve company constitute the second reserve. On the other hand, the battle group can easily muster six platoons on the front by using either two or three rifle companies on line. In the first case (Figure 3-A) two platoons constitute the first reserve and eight platoons are in the second. With three companies on line (Figure 3-B) the first reserve may be six platoons with four remaining as battle group reserve. It is also possible to deploy the battle group (Figure 3-C) with nine platoons forward and three and four in the first and second reserves, respectively.

The former regiment customarily placed eight platoons on the front line (Figure 2-B). There were then four platoons in the first reserve, six in the second, and nine in the third or regimental reserve.

Certain facts are now apparent. The battle group is superior to the battalion both in front-line strength and in reserve. It can muster as much or more front-line

strength than was customarily employed by the regiment. The regiment had one additional echelon of reserves that the battle group has not. The total reserves within the regiment were greater than those now within the battle group. A greater variety of combinations is available within the battle group than was physically possible in the battalion or considered practicable within the regiment.

From these observations we can conclude that we can reasonably expect as much from a battle group deployed on the forward edge of the battle area (FEBA) as we did from a regiment on the main line of resistance (MLR). However, it cannot be denied that the regiment had a greater capability for defense in depth.

#### Space and firepower

Now let's look at the space these units can cover in position defense. Here the sketches speak for themselves. A front of more than five thousand yards was considered rather wide for the regiment. Now that width is accepted as quite normal for the battle group. Figure 3-C illustrates how a battle group can cover more than seven thousand yards without overextending. Naturally, the mission, the terrain, and the enemy's capability would govern both old and new organizations.

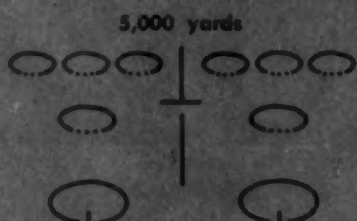
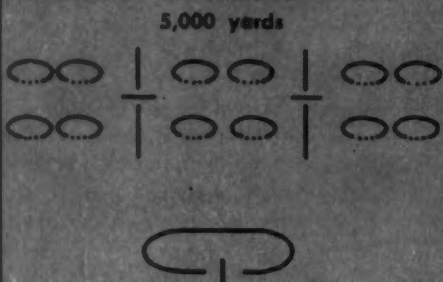
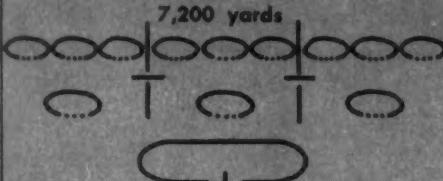
The point is that, conditions being equal, the battle group can cover a wider front than could the regiment.

In examining the firepower brought to bear on the front, we see that the battalion's cannot compare with the battle group's. The matter resolves into a comparison of regiment and battle group. The former has a slight edge here in indirect-fire weapons, but omitting tanks, the battle group is slightly better off in AT weapons. The regiment's advantage in machine guns is considerable, but is somewhat offset by the greater number of automatic rifles in the battle group (compare Figures 2-B and 3-C). The total of automatic weapons on the FEBA is 72 in the battle group and 80 in the regiment on the MLR. Over-all, the regiment in contact is slightly superior in firepower to the battle group. This statement disregards atomic weapons which

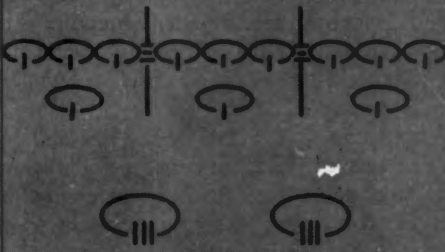
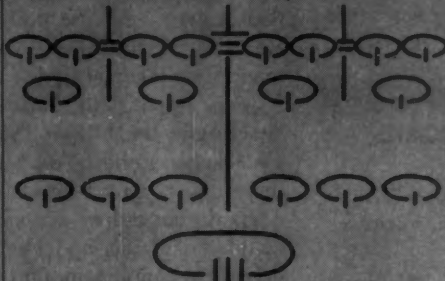
might be available to the battle group on call and which in one big blow can make up for a multitude of deficiencies.

Formations for the offense are, schematically at least, quite similar to those usually adopted in position defense. That is to say, similar patterns are followed in deploying front-line or assault platoons and echeloning reserves. An important difference is the greater need for flexibility brought about by the fact that when we assault, usually the enemy selects the battle area, whereas when we defend, the choice is ours.

With these points in mind, let us briefly discuss the capabilities of the regiment and the battle group. When employing the old two-up-one-back scheme, a regiment usually had from eight to twelve platoons in the assault. Battalion reserves added up to six more platoons while

FIGURE 3. SCHEMATIC DEPLOYMENT OF PENTOMIC BATTLE GROUP			
RIFLE PLATOONS			FIRE POWER IN CONTACT
Front:	6	 <p>5,000 yards</p> <p>(A) Battle Group in Defense— 2 Companies on line</p>	Automatic weapons:
1st Reserve:	2		Automatic rifles 36
2d Reserve:	8		Machine guns 12
			Antitank weapons:
			3.5-in rocket launchers 12
			106mm recoilless rifles 4
			76mm guns 2
			90mm guns 4
			Indirect-fire weapons:
			81mm mortars 6
			4.2-in mortars 8
Front:	6	 <p>5,000 yards</p> <p>(B) Battle Group in Defense— 3 Companies on line</p>	Automatic weapons:
1st Reserve:	6		Automatic rifles 36
2d Reserve:	4		Machine guns 12
			Antitank weapons:
			3.5-in rocket launchers 12
			106mm recoilless rifles 6
			76mm guns 2
			90mm guns 4
			Indirect-fire weapons:
			81mm mortars 9
			4.2-in mortars 8
Front:	9	 <p>7,200 yards</p> <p>(C) Battle Group in Defense— 3 Companies on line</p>	Automatic weapons:
1st Reserve:	3		Automatic rifles 54
2d Reserve:	4		Machine guns 18
			Antitank weapons:
			3.5-in rocket launchers 18
			106mm recoilless rifles 6
			76mm guns 2
			90mm guns 4

**FIGURE 4. PENTOMIC AND TRIANGULAR DIVISIONS IN DEFENSE**

RIFLE PLATOONS		FIRE POWER IN CONTACT	
Front:	27	<b>Automatic weapons:</b>	
1st Reserve:	9	Automatic rifles	162
2d Reserve:	12	Machine guns	54
3d Reserve:	32	<b>Antitank weapons:</b>	
		3.5-in rocket launchers	54
		106mm recoilless rifles	18
		76mm guns	6
		90mm guns	12
		<b>Indirect-fire weapons:</b>	
(A) Pentomic Division in Defense		81mm mortars	27
		4.2-in mortars	24
Front:	16	<b>Automatic weapons:</b>	
1st Reserve:	8	Automatic rifles	96
2d Reserve:	12	Machine guns	64
3d Reserve:	18	<b>Antitank weapons:</b>	
4th Reserve:	27	3.5-in rocket launchers	24
		106mm recoilless rifles	24
		<b>Indirect-fire weapons:</b>	
		60mm mortars	24
		81mm mortars	24
		4.2-in mortars	24
(B) Triangular Division in Defense			

the regimental commander had nine at his disposal in his reserve battalion. Most likely, the battle group will assault with either two or three rifle companies. This gives a possibility of from four to twelve platoons forward and a battle group reserve varying from eight to four. Here again note the one additional level of reserves in the old organization. However, it should be clear that the reserves directly controlled by the commander may be as strong as, or stronger, in the battle group than they were in the regiment. It is really only at the "local" reserve level that the regiment has an advantage. In an atomic-supported attack the need for these local reserves could be greatly diminished and the battle group easily accomplish any mission that might be assigned the regiment.

#### Pentagonal versus triangular division

What about a non-atomic or non-active atomic situation? The best answer is that after the invention of gunpowder there were few situations where the phalanx would have been effective. I won't argue the point that a World War II regiment was more effective on that war's battlefield than a battle group might have been. However, I strongly believe that a Pentomic division's five battle groups would give the old three-regiment

infantry division a very hard time on any battlefield under any conditions.

I offer Figure 4 in support of this last point. Disregarding atomics completely, the Pentomic division can bring considerably more combat power against the enemy in the so-called "normal" or "average" situation than could the triangular organization. Moreover, Pentomic units, from division down to platoon, are not as rigid as the old formations. The greater number of different combinations available to the Pentomic commander is far better suited to the infinite variations of the atomic battlefield than were the limited-task organizations possible under the triangular concept.

Many military planners have preconceived opinions of what a battle group should be. I have tried to show that the solution cannot be stated as an absolute equation to any pre-atomic capabilities. What I have said here does not pretend to be a complete analysis in itself. By listing a few of the essential elements of battle capability in the form of schematic comparisons of old and new, I have set forth what I consider a good basis for such an analysis. The ultimate test of any military organization is never made in peacetime. For the battle group and the Pentomic concept, as it was for the triangular structure, the battle will be the payoff.



## DECISION IN AIR DEFENSE

(Continued from page 18)

ITEM. Local air defense should be scrapped in favor of area-defense systems.

FACT. The Hercules system provides a higher level of defense effectiveness in terms of density, accuracy, altitude capability, reliability and ability to operate through electronic jamming than any other land-based surface-to-air missile system either operational or about to become operational (this includes Bomarc). As to the semantic argument that Hercules gives a "point" defense as opposed to "area" defense, it can be observed that this is a large "point," since the area of coverage of Hercules is actually about 20,000 square miles. Furthermore, Hercules is not dependent upon an intricate control system. It is integrated into the Missile Master system which coordinates fire control and which itself can be integrated into the Semiautomatic Ground Environment (SAGE) system for target detection, whenever that system becomes operational. Finally, the wide-

### HERCULES TEST FIRINGS INDICATE MOBILITY OF SYSTEM

An assessment of the results of the recent Army Nike Hercules test firings at Eglin Air Force Base, Florida, indicates that this air defense weapon has the mobility essential for the support of Army operations in any part of the world, the Department of the Army announced today.

An Army task force from Fort Bliss, Texas, commanded by Brigadier General John T. Snodgrass, tested the mobility of the antiaircraft system using both air and ground transportation. The tests proved that every piece of Hercules equipment can be airlifted easily and quickly.

Other accomplishments of the task force included: The first firing of antiaircraft missiles at target drones flying in formation, successfully picking off the lead F-80 drone; the first firing of Nike Hercules with live warheads near a populated area; and the first firing of two Hercules missiles simultaneously in salvo. The analysis of test results shows that the entire formation of three F-80 drones would have been destroyed had a nuclear warhead been used in place of the conventional high explosive warhead.

Had launcher emplacements been previously prepared, the Hercules batteries could have gone into action within hours after arrival. According to General Snodgrass, a field type mobile launcher now under development will soon eliminate the requirement for prepared emplacements for Hercules.

Six Hercules missiles were fired during the tests in Florida, three of which carried conventional warheads. The remaining three rounds carried full instrumentation instead of warheads and provided valuable information. All rounds performed perfectly.

Department of Defense Press Release  
6 September 1958

spread deployment of Hercules in heavily defended parts of the U. S. constitutes both a perimeter and an area defense system.

ITEM. Nike Hercules is incapable of effective operation when the enemy uses electronic countermeasures.

FACT. Both Hercules and Hawk have demonstrated that they can operate effectively under conditions of severe radar jamming. This performance cannot be equalled by any other land-based air-defense weapons system which is operational or approaching operational status.

ITEM. Nike Ajax and Hercules cannot tell the difference between friendly and enemy aircraft and therefore Army air-defense units have adopted the policy of "shooting everything down and sorting them out on the ground."

FACT. It is nice to know that some air people will concede that Army missiles aren't useless and can shoot "everything down," but for the implied rebuke, note that Army air-defense units are part and parcel of the Continental Air Defense Command (CONAD), commanded by General Earle E. Partridge of the Air Force. It is his responsibility to defend the U. S. against air attack with the USAF, Navy and Army units which are assigned to him. Army air-defense units attack only those targets which he wants attacked, and no others. They do not order "weapons free" except on his command. Nike Ajax and Hercules units provide the air-defense system maximum time before firing to identify targets since the time it takes for them to engage a hostile target is very short.

ITEM. Hercules is a single-target defense weapon, and if the enemy chooses to engage other targets many local missile units may never enter the fight.

FACT. If this occurs, the local defense will have accomplished its mission of protecting its area by deterring the enemy. Actually, if the enemy is determined to make a serious air attack on the U. S., he will find it difficult to avoid Hercules defenses.

ITEM. The Army's air-defense tactics invite the enemy to concentrate the air battle over the target area.

FACT. Ideally, the air battle should be as far away from the targets as possible. Unfortunately, the development of an impregnable perimeter defense is presently entirely theoretical since the state of the art and financial limitations preclude it at this time. Only the Army's surface-to-air missile systems, because of their rapid reaction time, high speed, and type of deployment can bring to bear a dense rate of fire at a cost that is within the bounds of economic realism.

ITEM. Hercules has a fifteen-minute response time.

FACT. Under operational conditions a Hercules unit can launch a missile instantaneously. One of the alert conditions used by the Army Air Defense Command to prescribe a status for specific units is a fifteen-minute status. This does not mean that fifteen minutes are required to launch a missile. Actually, it is meaningless to say that so many minutes are required to



launch a missile. The launching is only a part of the entire engagement procedure, which begins with the acquisition of the target by radar.

**ITEM.** Hercules cannot possibly be effective against missiles launched from enemy aircraft "standing" beyond the range of the defense missiles.

**FACT.** This presupposes the ability to fire a missile from a range of seventy-five miles or more with reasonable accuracy from the moving platform of an aircraft. There is some question of whether this can be done at this time. Furthermore, Hercules can shoot down air-to-surface missiles (ASM) that come within its range. It is the only air-defense weapon that can engage and destroy ASMs of the Rascal type within and at altitudes up to 100,000 feet and at velocities in excess of Mach 2. Since an ASM can operate above the capability of air-breathing systems (such as the ram-jet engines used by Bomarc), an air-defense missile must be used which is not dependent upon the earth's atmosphere for oxygen. Hercules fulfills these requirements. Also, Hercules' radars have the capability of detecting and locking on the extremely small cross-sectional area of an ASM in flight. No other land-based air-defense weapon now operational or contemplated for operation is capable of engaging and destroying air-to-surface missiles.

In this explanation of Hercules' capabilities, there has been no intention of suggesting that the Nike family of weapons is perfect and the last word in missiles. On the contrary, the Army's missile builders take pride in the fact that they are building missiles that are useful and—improvable as the state of the art advances. There is no ground-to-air missile in existence in the Western world today with a better record in practice firings. Sixty-five per cent of the 190 test firings of Hercules have been successful.

**U**NTIL Mr. McElroy makes his decision, construction of all new defense missile sites has been halted. This means a delay, possibly a crucial one, in perfecting the air defenses of the United States. If it is eventually decided that Bomarc should be used, Mr. McElroy could well consider the decision his predecessor made almost two years ago in the cases of the Jupiter IRBM and the land-based Talos SAM, and use it as a precedent.

Mr. Wilson, it will be recalled, ruled that the Army could continue to produce Jupiter but that it would be turned over to the Air Force for operational use. At the

same time he ruled that the land-based version of the Navy's Talos would be the operational responsibility of the Army.

If he follows this precedent Mr. McElroy would be well advised to give the Army operational control of Bomarc. This would be an orderly and sensible solution since all other operational land-based SAMs are Army weapons, and the USAF has had no experience in operating surface-to-air missiles.

Such a decision would remove a cancerous irritant that affects Army-Air Force relationships, especially within the Continental Air Defense Command at Colorado Springs where a close and abiding understanding between services is essential. Here is a case where a wise and moderate roles decision by the Department of Defense would do more to cement good feeling than any amount of a-plague-on-both-your-houses exhortations or the threat of knocking heads together.

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## THE ARMY IN LEBANON

*(Continued from page 24)*

Choueifat along the length of the massif the air was like spring in the Rockies. There is a freak of climate which blesses this portion of the Lebanese high ground.

Soon after the sun rises the clouds gather thick just above the rooftops and trees and by noon a mist is falling on the park benches. It is like a heaven-sent canopy, which invariably lifts shortly after the sun goes down. The body breathes joyously in this atmosphere.

But down in the bottoms, minutes from this Nirvana, General Gray's troops continued to sweat out a problem for the United States under a merciless sun, knowing no respite. The fault in the Lebanese summer climate isn't that the heat is so intense or the sunlight so burning but that both are so lastingly monotonous. It is the same even griddle day after day, no cloud in the sky, no breeze off the shore, until after the light dies.

The force tenting in the olives at Choueifat might have been less happy had it been aware of the contrast. One can but speculate. No matter the sun, it was a cool camp, air-conditioned by the hard-driving unity and spiritual resilience of willing men.

One classic remark from the early ordeal of the camp is worth preserving. The day came when the force lost its first man by drowning. Of course, it was a shock. The commander got his officers together to break the news.

He said to them: "The man died because he strayed away from his buddy. That shouldn't happen. In this situation we all need one another."

In time better object lessons and more eloquent words may come from out the Lebanon intervention. But as to the spirit which builds greatness in an Army, these will do.

### LAST OF ITS TYPE

Essentially, [Bomarc] is a high-performance, unmanned aircraft and is probably the last of its type. Future anti-missile missiles and hyper-performance anti-aircraft missiles will probably be rocket powered all the way.

*Missiles and Rockets*  
28 July 1958

# THE MONTH'S CEREBRATIONS

## PRESTIGE MUST BE EARNED

**MSGT HARRY WERNER**

Some months ago at a Western post one cold Saturday morning, after the last file of the division parade passed the reviewing stand, the crowd of spectators began to break up. The throng of which I was a part was halted at an intersection by heavy vehicular traffic. Everyone was anxious to get out of the cold and snow and the air rang with remarks such as "Where are the MPs?", "What a mess!" and others. The long wait was broken by a sergeant who stepped off the curb, walked to the center of the intersection, and began guiding and directing traffic. Within minutes the jam ended and the crowd crossed over.

Having witnessed this incident and a few like it where noncommissioned officers took charge, I have concluded that the Army, from Secretary down, cannot give us prestige. Regulations may direct how a soldier will be paid, for instance, and others may serve as guides to administration. But where is the document that prescribes how a noncommissioned officer acquires prestige—that intangible quality he must earn himself?

Many of us demand prestige without even appreciating its significance or purpose. The answer to the question, "What good is prestige?" is a simple one, provided you still believe we are the backbone of the Army.

No leader, regardless of grade, can exert the moral and soldierly influence of the noncommissioned officer. That attribute is invaluable in promoting the Army's tradition and mission. While many virtues surround the value of prestige, one must be considered outstanding, and can be applied only by the dedicated soldier. This is the belief that the United States Army, when the time comes, will be the salutingest and shootingest in the world.

Along with saluting goes discipline, which needs no further comment. But the shooting is the ultimate that a

combat leader desires in his men. For the battle to pay off, it must be the culmination of what the young soldier learned in training and garrison from his noncommissioned leaders. The prestige the noncommissioned officer earned for himself among his men will be the thing that will serve him in a trying situation, when he must depend upon them to give him what he needs.

Now every soldier knows the difference between right and wrong. It is natural that in our everyday routines we do the things we know we must do, and ignore those that seem to concern other people. For the noncommissioned officer who wants prestige that is not enough. If he would earn the prestige he demands he must seek out the right thing to do—and do it. Recall the traffic-directing sergeant. He couldn't have been censured had he done nothing, but he saw the right thing to do—and he did it. His act brought prestige to his stripes.

In more than nineteen years of service I have noted quite a few things that were done by the many noncommissioned officers under whom I served. They knew the meaning of prestige. Their conduct supplied the answers to the questions that follow, and is worthy of emulation.

Are you willing to forget your specialized job and jump into a breach? Do you attack your assignments with enthusiasm, in the spirit that you do

them because you want to, not because you have to? Are you sincere in your dealings? Can the general, the lieutenant, and the private take you at your word? Do you allow family affairs, your drinking, your women, your debts, to become matters of official concern? Do you attend religious services with your family, and participate in post functions? Are you part of the Army family? Did you welcome that new man to your unit or office, and make him feel he's just the guy you've been waiting for? How about your sense of humor? Can you relax yourself and your men? Do you ever forget your rank and pick up that stray piece of paper that mars the appearance of your area?

It seems to me two disturbing things enter into any discussion of noncommissioned prestige. First is the compromise. Compromise your stripes, and any good you have done will be interred with your bones. Many of us complain that we are not accorded prestige. "The kids in today's Army have no respect for their noncommissioned officers." If we examine ourselves closely we may find that quite a few of the complainers are at fault. A simple example is the otherwise good, sharp noncommissioned officer who carries his experience of the night before back to duty next day. A boozy breath or a lipsticked shirt brings the night's frolic to everyone's attention. When that happens, the noncommissioned officer, along with his stripes and his authority, is compromised. The making like a noncommissioned officer is vacuous and hollow. Do I mean to imply we live in glass houses? I certainly do. It's when our escapades, our sloppy appearance, our derelictions, become matters of concern to the people upstairs and downstairs that our prestige takes a nose dive.

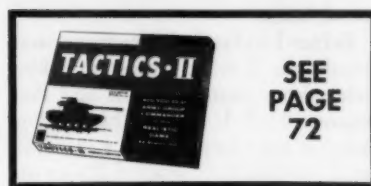
I am also disturbed by the officer who can't be bothered. Too often the lieutenant is concerned about what the captain thinks of him; the captain worries about what the major thinks;

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and so on up the line. But it seems to me that some officers give little thought to what their men think of their noncommissioned officers. No doubt the time-honored regulation that no enlisted man may punish another is a meritorious one. But too often the noncommissioned officer, acting in the best of tradition and within the scope of his office, meets contempt, insubordination and, on occasion, downright disobedience. Action by the commander on the noncommissioned officer's report sometimes lags. The old saying, "back up your noncoms," may be redundant, but that is where many commanders fail, especially in the case of a habitual offender.

Too many commanders clamor for good noncommissioned officers, but precious few make an effort to back them up and thereby aid in maintaining their prestige. Such failure can lead to all sorts of occurrences. I'll cite one.

A few months ago a soldier, ordered to perform a proper task, assaulted his



supervisor. When the incident was reported to the unit commander he said, "Forget it; he'll be leaving in two weeks." Five of this unit's noncommissioned officers wrongfully tried the offender by kangaroo court. To make a long story short, a soldier got a working over and five noncommissioned officers were tried by court-martial. This commander's lack of action, among other things, didn't contribute to their prestige, although their acquittal may have restored some of the damage.

But the back-up, or lack of it, is not the true gage of whether a noncommissioned officer's prestige must be respected. While the failure to back up

definitely undermines our prestige quotient, we must not acquire the attitude of "to hell with it." Swallow hard and keep yourself the dedicated soldier. Always feel that "the wings will fit and the harp will be in tune."

"Duty, Honor, Country"—not for a moment do I believe the significance of those three words is reserved for the graduates of the Army's trade school. Every noncommissioned officer has as much stake in them as Grant, MacArthur, Taylor or Colin Kelly. If we demand prestige, let's first learn its established standards. There is no more fitting place to start than by learning the true meaning of "Duty, Honor, Country," and acting accordingly. We'll need nothing more.

**Master Sergeant Harry Werner** is presently serving in the G4 Section, U. S. Eighth Army in Korea. In his nineteen years of service he had twelve as a warrant officer and served in the JAGC and participated in reviewing war crime trials at Munich, Germany.

## WOE TIME FOR SERGEANTS

### SFC EARL O. CULVER

**S**O far as my Army career is concerned, Time has always been against me. Queen Victoria was still alive that day in 1898 when I was born on a little Iowa farm.

I always wanted to be a soldier. In my dreams I led my schoolmates around the schoolyard with a wooden sword on my shoulder. But I never commanded a formation of my schoolmates. They commanded me. I was the youngest and smallest among them.

Now I am a veteran of three wars, and I might as well have carried a wooden sword through all of them. I was too young to fight in the First World War, too old for World War II; but for the Korea unpleasantness I was just right.

The Armistice was signed in 1918 while I was still in the equivalent of our OCS at Camp Pike, Arkansas. So I finished college, took a commission as second lieutenant in the Officers' Reserve Corps, and began teaching school.

After twenty years of civilian teaching I was ordered to extended active duty as a captain early in 1941 and assigned as instructor in the ROTC at

my own university. In the Army you're nearly always teaching at or attending a school. My military experience has been no exception.

When World War II came I was a major, and asked for duty that would send me overseas. I was too old, according to personnel policies, and so wound up as Professor of Military Science and Tactics at a military school in St. Louis. There in 1945 I applied for a commission in the Regular Army. Again I was too old—by exactly seven days.

After occupation duty in Japan, I went back to my old college for another tour of ROTC duty until Korea. Apparently I wasn't too old for this fight, for I landed in Korea in the fall of 1950.

I was a lieutenant colonel then, but I might as well have carried a wooden sword in that conflict. Oh, yes, I was shot at once. One dark night tracers crossed the road in front of my jeep.

My driver asked, "What'll I do?"

I answered, "Step on it!" He did, we got away, and no one was hurt.

After Korea, I served as Troop Information and Education Officer at a couple of posts. I was at Fort Carson, Colorado, when Time caught up with me again in 1955.

Once more I was too old. New regulations required that a Reserve lieutenant colonel who could not accumulate twenty years of active duty before reaching fifty-five must be separated. Since I was already fifty-seven and five years short of the required twenty, I was out.

Believing me qualified for special jobs of a critical nature, my commander, a major general, requested that I be retained. Apparently, the commander of Fifth Army approved. Nevertheless, I have in my files a good example of how to say No. This letter is signed by The Adjutant General of the Army. I really like his last paragraph: "This adverse decision should not be construed as any reflection on the character of Colonel Culver's military service. On the contrary, his performance of duty while a member of the United States Army reflects great credit upon himself as an individual and also upon the military service."

So I was separated. But I'm not griping. Many officers with records like mine were separated before and after I was. I have no quarrel with the Army; only with Time. Officers eliminated after July 1956 are entitled to readjustment pay. I was out too early



for that, so that Ol' Devil Time cost me more than five thousand dollars.

I could have gone back to teaching, but I was hostage to Time still. Having married a bit late, I had two daughters in grade school. Civilian teaching offered neither an adequate income nor promise of retirement pay. By serving for five more years I could get in twenty years of active duty and then retire on seventy-five per cent of a lieutenant colonel's pay. (I hope legislation doesn't change before then!) So, on the day after separation I enlisted as a master sergeant.

I wondered how things would go. I hadn't been an enlisted man since December 1918. Because I had taught most of my life, I requested and received assignment to ROTC. Here I am once more, teaching youngsters. Contrary to an old belief, the Army doesn't always put square pegs into

round holes.

Before I enlisted, I sometimes wondered how I might adjust to taking orders from young captains and lieutenants. Had I known this modern Army of the United States a little better, I need not have worried. It's an unusual Army and a great one. After all, it is made up of men—most of them good men—who are led by some of the finest officers our country has ever produced.

Perhaps I should mention that before my active service began in 1941, I had taught for eleven years at a private military academy. I introduced to RIGHT and LEFT FACE boys who are now colonels. During my more than thirty years of teaching in and out of the Army, I hope I have played some small part in developing the leadership under which I now serve.

Thanks to the tact, the understanding, and the kindness of our officers, I have experienced no embarrassment or humiliation as an enlisted soldier.

I'll give one example.

Wearing my new master sergeant's stripes, I walked into Fitzsimons Army Hospital near Denver. A major was sitting in the lobby. Seeing me, he sprang to his feet with "Hello, Colonel Culver!"

We talked for quite a while about Fort Carson and the people we knew there. He remained standing all the time, and kept calling me "Sir." I didn't invite his attention to the chevrons on my sleeve. Perhaps I didn't think of it. He never mentioned my new rank either, but he could see.

He might have given me a bad time. At Fort Carson I had often inspected his battalion and usually found something wrong. Yet, he taught me a bit more about the United States Army. From his standpoint, I had not changed. From the summit of my years, I was still aware of his respect. Courtesy was an integral part of his training and it would not be submerged by my change to a lower rank. And at the time, neither of us saw anything unusual in our meeting. Just two soldiers glad to see each other.

I am now a master sergeant (SFC, E-7, at this writing) and have been for three years. From 1922 to 1940, I served many short terms of active duty as an officer. Second lieutenants saluted me for more than thirty years. Now I salute them.

Before most of my old officer friends had been transferred, I often went

back to Fort Carson and wandered into some of the headquarters offices. Majors, lieutenant colonels, and even colonels, rose and greeted me as always. They ignored my enlisted man's stripes.

I would sit down, have a smoke, and tell tales. When I left, I usually rendered a proper military salute. They grinned and returned it unless they reached out to shake hands. After all, they were soldiers too. But with their salute they would often say something like, "You old reprobate, don't forget to come back." Colonels shouldn't call a master sergeant an old reprobate.

Over me, officially, in my job today are several young captains, majors, and officers of higher grades. They advise me; sometimes I advise them. We work together. They treat me better than I was ever treated as a lieutenant colonel. My age may have something to do with their attitude, but I know it's more than that. There is a certain greatness in the soul of the United States Army.

Occasionally I take a bantering about my age. My commanding officer, a colonel, is the worst offender. He doesn't have much on me there, for he's not many years younger than I. However, he claims he found in my records an account of my first reprimand: a gig for irregularity at retreat inspection—buffalo manure on my musket.

Some time ago I received a letter from a retired officer who was my first commander in this present assignment. In that letter he mentioned my "adjustment" to enlisted status.

I didn't have much adjustment to make. If there was any adjustment, it was by the officers with whom I work. To them, courtesy is just as important going downward as upward. They know that every soldier must learn to use his weapon. They also know that an officer's weapon is men—still the greatest weapon of them all. These dedicated young officers of our Army know how to use that weapon.

Thanks to them, there has been very little "woe" in my time as a sergeant.

**Sergeant First Class Earl O. Culver** is on duty with the Army ROTC at Colorado State University, Fort Collins, Colorado. Before being called to active duty in 1941, he was head of the English Department at St. Johns Military Academy, Delafield, Wisconsin.

## Clausewitz... ON WAR

TRANSLATED BY  
O. S. MATTHIJS JOLLES

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# Irons In the Fire

## Rotodyne To Be Built in U. S.

The high-performance Rotodyne aircraft, made by Fairey Aviation Co., Ltd. in Britain, will be built in the U. S. under license to Kaman Aircraft Corp., Bloomfield, Conn. Rotodyne accomplishes vertical flight by four

1000-lb. thrust pressure jets mounted on the rotor blade tips. Forward flight is powered by two 3500 hp gas turbines driving two propellers. The aircraft carries 48 passengers or a 12,000 payload at a demonstrated cruising speed of 185 mph. Ability to land in confined areas heretofore restricted to helicopter operations, without requiring prepared landing sites, makes Rotodyne a useful vehicle for fast transportation of troops and military cargo.

## Handy Package Transportation

A self-contained Teletypewriter Communications Center, weighing only 1400 lbs., including its 350 lb. aluminum shelter, has been flight tested at Fort Devens. The rugged, helicopter-transportable shelter, designed to reduce the weight and increase the utility and efficiency of tactical ground systems, was developed by Craig Systems, Inc., Lawrence, Mass.



Teletypewriter Communications Center, lifted by H-34 helicopter to forward area, goes into operation shortly after helicopter landing.



## "Airsteel" for Rockets

A high-strength steel alloy for missiles and rockets called "airsteel" has been introduced by United States Steel Corp. The metal, which develops a tensile strength of 280,000 lbs. per sq. in., is cooled in air and then tempered. Most other alloy steels require quenching in oil or salt bath for tempering. The new steel has a tensile strength six times that used in auto bodies and is particularly suitable in missile applications.

## Army Seminole Weather Plane

In another step toward all-weather capability in the air, the Beechcraft L-23D is the first Army plane to be equipped with a RCA weather avoidance radar system. By detecting and displaying a picture of turbulent weather as far as 80 miles away, the system enables a pilot to avoid storm areas with a minimum of detouring. The plane also is capable of navigational terrain mapping. It will be evaluated by the Army Aviation Board at Fort Rucker for operational suitability.

## Something New in Bridgework

Army Engineer R&D Laboratories, Fort Belvoir, are conducting structural tests on four experimental all-welded aluminum truss panels for a military tactical bridge. It is anticipated that the truss components, fabricated by Aluminum Co. of America, will support a 60-ton tank load on about a 90-foot span. Results of the structural tests are expected to indicate the feasibility of welded aluminum truss panels for heavy military loads and to furnish data for more specific design criteria.

## War Game

A new, realistic war game set, called "Tactics II," is now available to amateur and professional strategists and tacticians from the Avalon Hill Co., 305 Gun Rd., Baltimore 27, Md. at \$4.95. The game is described a "chess-like, all skill war game . . . played in almost

every nation in the world . . . every principle of war applies. . . ." Kit includes 28" by 22" mapboard, unit counters, and 32-page instruction booklet

## See It Now Guard Training

Closed circuit TV was used for the first time recently in the training of Pennsylvania National Guardsmen. While troops of the 111th RCT played their roles in a frontal attack on a rifle company in defense, their fellow guardsmen sat in open bleachers watching the maneuver on a TV screen. Closed circuit TV has great potential as a training device, and applications in combat for surveillance of enemy forces. The remote controlled, portable Philco Industrial Television (ITV) equipment weighs less than 70 lbs. and the ITV camera is small enough to fit in a brief case.



Philco ITV camera picks up the "battle picture" and relays the scene to troops watching TV screen.



# HOT SPARKS

The Army's Pershing medium range ballistic missile is undergoing a speedup in development by the Martin Co. It is estimated that the lead time for Pershing—the interval between the first design and production—has been slashed by 60 per cent. The two-stage Pershing is described as having a selective range, depending upon the mission involved. Its new rubber-base solid propellant is expected to result in improved reliability, greater simplicity and savings in weight and size.

Republic Aviation Corp. has announced that it is beginning a \$35 million research and development program to intensify development of the advanced forms of aircraft, missiles and spacecraft called for in the aeronautical industry's transition to astronautics. The four year program was inaugurated to develop new, sophisticated forms of aircraft, to develop new families of missiles and missile systems as yet uncharted, and to stimulate design of manned vehicles for space travel.

Two new special tractors designed to meet future needs of Army Engineers, which can be air transported and dropped, have been developed by the Engineer R&D Laboratories at Fort Belvoir. The lighter and smaller vehicles are designed for increased mobility, reduction in types of vehicles, and reduced logistical support. A rubber-tired version ballastable all-purpose tractor (BAT) is capable of performing dozing and prime moving operations with twice the work potential of present day machines the same size.

A new night vision device enabling troops to see military objectives, with the aid of light from the stars, has been developed by Army Engineer R&D Laboratories. Known as the "Cascaded Photosensitive Image Intensifier," the new device differs from other night vision aids, gathering reflected starlight or diffused light from skyglow falling upon the objective. It then intensifies the diffused light to produce a distinguishable image.

A completely transistorized instrument system is being developed for a nuclear power reactor for the Army's cold weather training station at Fort Greely, Alaska, by General Electric Co. The primary nuclear system for the station will be supplied by ALCO Products, Inc. Schenectady, N. Y. Prime contractor for the project is Peter Kiewit Sons Co. of Omaha. The station will be the first nuclear power facility in Alaska.

The development of "hear and see" systems for faster procedures in aircraft maintenance, without sacrificing quality control, has resulted in a saving of more than 14,000 man-hours in five months at Fort

Benning. In the system, an aircraft inspector, using a throat mike and 1 lb. portable dictaphone tape recorder, indicates discrepancies discovered. The taped information is then played back for transfer to a work sheet and finally to a mechanic. A complementary system employs an X-ray machine which seeks out aircraft deficiencies for interpretation by mechanics.

In a demonstration of transportability, an Army HERCULES ground-to-air guided missile recently was flown from Texas in an Air Force Globemaster to take part in test firings in Florida.

A fully transistorized portable color TV system that can be operated from auto-type storage batteries, has been developed experimentally by RCA. The system, designed for closed circuit applications in military field reconnaissance as well as in other fields, employs two compact units totaling only 65 lbs.

A Signal Corps contract with the Raytheon Manufacturing Co., Waltham, Mass. will provide for a rugged version of mobile weather radar. The equipment will be installed in standard military trailers and will feature demountable antenna. The antenna reflector will be constructed of sectionalized lightweight spun aluminum.

Aero Service Corp., Phila. is offering a brochure describing how geodesy, geophysics, special earth models and analogs might aid advanced technical studies and projects. The brochure goes into mapping of jungle and desert areas, exploration and surveying with new electronic instruments and reconnaissance and detailed mapping for highways and industrial areas.

A contract extending production of radar beacons for the Army Signal Corps has been awarded to Avion division of ACF Industries, Inc. The follow-on contract covers continued

production of x-band beacons, used in missiles and missile drone test firings to extend the tracking range of ground radar.

Lockheed Aircraft Corp. has entered the field of ground support equipment for missiles and aircraft with establishment of its Special Products branch at its Marietta, Ga. Division. The new branch will produce missile airframe sub-assemblies, special purpose trailers, and other ground support equipment.

Army Ordnance has awarded a one-year \$21,000 grant to Illinois Institute of Technology for basic research on "Crystal Studies of Explosives," designed to lead to development of new explosives.

High speed transmission of digital data from magnetic tape over voice quality telephone circuits is offered by the Collins Radio Co., Burbank, Calif. Combination of the company's Kinetape Converter and its Kineplex Data System produces 300 characters per second and is adaptable to either IBM or Univac tapes.

"Math-O-Matic," a 224 page book of mathematical tables, is available from R/B crafters, 1642 Fairmont Ave., Phila. 30, Pa. at \$5.95. Prepared in West Germany, the book of tables offers rapid fire solution of math problems.

A series of zero power reactor experiments which will be conducted under contract with the Corps of Engineers has been initiated by the Martin Co.

An unclassified edition of the annual *Register of Planned Mobilization Producers* is now available to the public for the first time through DOD. The register lists about 18,000 plants with whom the services plan for military production in war emergency. The 1958 edition is available through the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

ARPA Director Roy W. Johnson has announced that the Air Research and Development Command has been authorized to let a feasibility study contract with General Dynamics Corporation's General Atomic Division. The investigation will deal with development of a new concept of propulsion employing controlled nuclear explosions.

A clearing house for collectors of embroidered emblems will be established by the A-B Emblem Corp. of 519-523 30th St., Union City, N. J. The clearing house will keep records of emblem collectors in the U. S., facilitate exchanges, and sponsor national exhibits of emblems.



Turbine-powered Sikorsky S-62, world's first amphibious helicopter, hits the choppy waters of Long Island Sound in a power-off landing. The 10- to 12-passenger S-62 is undergoing a series of rough water tests.

# THE MONTH'S BOOKS

## Army Aviation in Korea

**OPERATION GRASSHOPPER: A History of Army Aviation in Combat in Korea**  
By Darle Politella  
Robert R. Longo Company, 1958  
216 Pages; Illustrated; Maps; Index; \$4.95

Reviewed by

LT. COL. THOMAS O. MORROW, *Deputy Chief of Staff, USA Aviation Center, who has been associated with the Army Aviation program since 1942.*

The historical source material for this book, as the author states, is derived from his personal notes while serving as an information officer and courier pilot in Korea. From these come the background of war on which Lieutenant Politella profusely spreads the numerous anecdotes of Army aviators flying, cursing and dying up and down that bloody peninsula from 1950 into 1953.

As the first account of the daring and ingenuity of Army aviators in old airplane "spares" in all kinds of weather and under all sorts of conditions of terrain and combat, this book does a good job. The anecdotes, names, commendations and events will bring back forgotten incidents to those who fought there, whether on the ground or in the air. But most particularly, this book is for Army aviators who were there or who had buddies there.

The sketches by Dan V. Cavliere and Robert R. Longo are excellent, and the book's design, layout and binding are attractive. The chronology of events and the interesting "Album" of vocabulary and snapshots in the appendices add much to the text. In addition, cross-indexing provides a ready reference to the happenings, persons and battles involved.

While the author admittedly is somewhat sketchy in relating his story to military movements and strategy, he does write of his primary subject with the flavor of authenticity. In fact, had he as strongly related the military facts with the specific personal stories, as he did the narratives with the particular aviators who experienced them, *Operation Grasshopper* would be military history of the first order.

Nevertheless, this book is a first in its own right by telling the heroic story of Army aviators "from aggression to armistice." The story needed to be told, and this author is to be praised for his industry and skill in assembling so many anecdotes about the grass-hopping, hill-

skimming men who carried the job through against great odds. General Mark W. Clark endorses the book in his foreword.

## Failure of Sea Lion

**OPERATION SEA LION: German Plans for the Invasion of England, 1939-1942**  
By Ronald Wheatley  
Oxford University Press, 1958  
201 Pages; Illustrated; Maps; Index; \$7.00

Reviewed by

LT. COL. H. A. DEWEERD, *USAR, a former Associate Editor of this magazine, former Professor of History at the University of Missouri and author of many articles on WWII.*

Under the code name SEA LION, Hitler's staffs prepared several plans for the invasion of England during World War II. These were actual war plans and were at one time seriously intended. For many reasons, however, they were never put into effect. These plans are described and analyzed in this compact, well-organized and heavily documented book which grew out of a special study prepared for the United Kingdom's official series of military histories. The story has been told many times, but it has never been presented so convincingly. Mr. Wheatley has subjected every part of the German plans to careful scrutiny and his conclusions about their inappropriateness to the situation in the summer of 1940 can hardly be questioned.

It was Hitler's unwillingness to wait, his impatience after the sweeping victories in Poland, Norway, Holland and France which led him to abandon the early German plans for starving England by air and sea attacks on her shipping. Had Hitler avoided war with the United States and the Soviet Union, and had he concentrated Germany's resources on a blockade of England, a favorable result could almost have been guaranteed. But it would have taken a long time, and Der Führer would not wait. He abandoned a strategy of attrition for one of annihilation and prepared plans for the invasion. These plans could not be implemented for three reasons: Germany failed to gain air superiority over the invasion area; her air attacks on the British economy and morale failed; and the German Navy, depleted by the Norwegian campaign, was unable to ferry the army across the Channel. When failure became apparent

late in 1940, Hitler turned his attention to the east. By this time SEA LION was dead.

There is new evidence in this book about the extensiveness of German preparations to carry out the invasion of England. Barges were brought up from all over Europe and hastily converted into landing craft. Tanks were modified to operate under water, mines pre-positioned, troops exercised, and staffs briefed. Even Himmler got into the act with detailed plans for rounding up resistance leaders and for setting up Gestapo centers in the leading British cities.

The invasion project caused a serious dislocation of the German war effort and economy. It strained the resources of the German navy and prevented a full-fledged attack on British shipping. It caused delays in the programs of the army and the air force. Most important of all, it led Hitler to abandon the strategy of exhaustion against England in favor of an adventurous strategy of attack on the USSR and war with the United States. These strange and unnecessary acts sealed the doom of the Third Reich.

This is an excellent account, full of detailed information, and it makes a real contribution to the history of World War II.

## Communist Seizure of Power

**THE RUSSIAN REVOLUTION**  
By Alan Moorehead  
Harper & Brothers, 1958  
301 Pages; Illustrated; Index; \$5.00

Reviewed by

COL. CHARLES W. MCCARTHY, *USA retired, who has been long associated with AUSA and its predecessors, and a student of Communist techniques.*

Two great historical events of the first half of the twentieth century have been much talked about and written about, and what has been written has been widely read. Yet, despite all this there is a pathetic lack of knowledge on the part of people who should know the causes, the chronology of events and the roles and aspirations of the principal actors. The events to which I refer are the Russian Revolution and the Spanish Civil War.

We are constantly reminded that certain events are "too recent for history," yet we yearn for a historical presentation of the actions that occurred during our



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lifetime—actions which, while distant removed from our shores, definitely influence our lives. We might submit to this decision regarding the Spanish Civil War because feeling in certain quarters is still warmed by actual participation as well as proximity, but for the Russian Revolution there is little time left for many of us who, in our youth or adolescence, read the headlines with wide-eyed wonder and have lived with the result ever since.

Fortunately for this generation, a most adequate job has been done on the most important of the two events by Alan Moorehead, whose *Gallipoli* was such an outstanding contribution to military literature. The unusual circumstances in which his book came to be written invite the reader and give an atmosphere of authenticity to the result.

In the preface the author tells of an extraordinary job of research done by Dr. Stefan T. Possony (not unknown to readers of *ARMY*) and associates on the records of the German Foreign Office which became available after World War II. After struggling along with limited funds this group obtained the financial support of *Life* magazine. *Life* in turn asked Mr. Moorehead to do a full-length book based on this information plus other available sources.

It is difficult to handle the chronology of the Russian Revolution and at the same time bring into the action many of the principals who made but small contribution until those crowded days between March and November 1917. Yet Mr. Moorehead makes the reader aware of their presence as they wait off-stage. When they enter they adjust well to the continuity of the story.

There is just enough of a background of Russian history, and while much of the material is drawn from the old German Foreign Office files, this source is not overplayed. It is fed into the action with a complete absence of smugness which might have crept in since the author knows he has new information.

One cannot expect a definitive history of the Russian Revolution in 285 pages, and the action from March through November is largely confined to Petrograd (formerly St. Petersburg, now Leningrad) with brief references to Moscow and the reactions of the army at the front. The failures on the part of Kerensky and his ministers and of the army's senior officers to rally support from the troops to crush the Bolsheviks are recited. But how the army at the front was drawn into this whirlpool when the Bolsheviks controlled only a portion of Petrograd remains untold. Mr. Moorehead concedes that military success might well have averted revolution but with so many forces opposed and so many obstacles in its way it hadn't a chance.

The reaction of Moscow to this book, if any, should be most interesting. Lenin's preparation and participation often has been attributed to German efforts to foment revolution in Russia in order to hasten victory, and as often has been denied by the Communists. Now this book discloses sources that prove conclusively that German scheming and money made a considerable contribution to Bolshevik success. To quote from the book's jacket, "We see that from the Finland Station to Berchtesgaden and Buchenwald, to Korea, to Hungary is a very short, straight road," which, one might add, has not yet reached a dead end.

## Who Lost Gettysburg?

### DEATH OF A NATION

By Clifford Dowdley

Alfred A. Knopf, 1958

393 Pages; Maps; Index; \$5.00

Reviewed by

MAJ. GEN. E. J. STACKPOLE, PaNG, Retired, Harrisburg (Pa.) publisher and author of books on the Fredericksburg and Gettysburg campaigns.

*Death of a Nation*, a literate and interesting account of Lee's second invasion of the North, is easy reading for the most part and appears to be based on a very detailed research, but the narrative is highly opinionated and lacks conviction in its labored effort to prove the author's thesis that Lee lost Gettysburg largely because President Davis failed to give him a free rein; because Longstreet sulked and procrastinated as the result of Lee's tacit refusal to adopt his strategic and tactical proposals; and because two new corps commanders (Ewell and A. P. Hill) together with Jeb Stuart and a number of division and brigade commanders, fell short of measuring up to expectations. The reader gets the impression, for example, that Lee was seriously handicapped because Davis deprived him of troops needed for the invasion; yet 75,000 Confederates fought 100,000 Federals at Gettysburg, whereas at Chancellorsville, only a few weeks before, Lee had soundly trounced Hooker's 120,000-man army with only 60,000.

Practically all his important subordinates failed Lee at one stage or another, according to the author, and certain division and brigade commanders are pictured as ineffective in unaccustomed battle commands because of recent promotions, conveniently ignoring the fact that such a situation is not unusual in a fighting army and was equally true of Meade's army. More perceptive writers have recognized the greatness of Lee without throwing all the blame on others, and Lee himself attributed the defeat to his own mistaken belief that his army was invincible, without casting aspersions on his subordinates.

**ARMY**



The reader has to search assiduously to determine that the Army of the Potomac was other than a passive observer of the Confederate action. After all, Meade and his army did chalk up a few worthwhile feats, not the least of which was the consummate skill with which the Union commander repeatedly shifted his troops to critical points to meet Lee's thrusts on the second and third days. Nor is there even a passing recognition of the significant role played by the Federal cavalry in screening Meade's concentration, in diverting Stuart's cavalry from a direct approach to the battlefield from Hanover, and in blocking Stuart's effort to crash Meade's rear from a position several miles east of Gettysburg on the afternoon of the third day.

While Hill, Ewell and Stuart are charged with substantially contributing to the Confederate failure, the author's heavy guns are trained on Longstreet, "whose ideas on strategy were vaporous and primitive." Extended treatment is given to the clash of wills between Lee and Longstreet, with Old Pete on the receiving end in the role of an insubordinate obstructionist whose recalcitrance was a major cause of Lee's defeat. Unmentioned in the one-sided presentation of the diametric strategic viewpoints of the two generals are the well-known facts that Lee pre-empted Longstreet's responsibility for making a reconnaissance of the Federal position to be attacked on the second day, assigned a staff officer to lead his divisions to their jump-off position, and ignored the corps commander when personally instructing McLaws where to place his division for the attack. Without exonerating Longstreet, who certainly *did* sulk and drag his feet, that able general may have had some justification for resentment at what he considered cavalier treatment at the hands of his commanding general.

In discussing Lee's plan of action for the second day, and in the course of his lengthy and detailed criticism of Longstreet, the author, with an airy wave of his pen, lightly dismisses the considered judgment of many experienced military men who today believe that Longstreet's plan might well have succeeded. Toward the end of his diatribe the author has this to say:

"According to Longstreet, he urged Lee to try 'slipping around' to Meade's left, southward, and interposing their army in a strong position between Washington and the Federals. The number of latter-day supporters of this alleged plan is amazing in view of some elementary considerations.

"There is a scarcity of strong positions between Gettysburg and Washington; there were the hazards of supplying the army while in contact with the enemy; and there was the extreme difficulty of

## Selected Check List of the Month's Books

*This run-down of some of the books received for review during the month preceding our deadline is to give our readers who like to follow current literature a monthly check list of the most important, useful and potentially popular books. Full reviews of some of these books may appear in this or subsequent issues. Any of these titles may be purchased through the Combat Forces Book Service.*

**THE CADET.** By Cadet B. K. Jervell, Jr. West Point Publishers, 1958. 64 Pages; \$1.00. Sixty-four very funny animal photographs satirizing cadet life, as seen from the inside of USMA. Follows the pattern of the usual "zoo" collections.

**DOCUMENTS ON AMERICAN FOREIGN RELATIONS, 1957.** Edited by Paul E. Zinner. Harper & Brothers, 1958. 463 Pages; Index; \$6.00. Major treaties, agreements, diplomatic notes, communiqués, policy statements and public speeches bearing on our world relations, otherwise located only by lengthy research.

**INFANTRY UNIT LEADER'S GUIDE.** By Major Charles Multop and Captain William G. Barrett. Military Service Publishing Company, 1958. 182 Pages; Illustrated; Index; \$2.50. New and revised third edition, brought up to June 1958, of a pocket-sized guide that covers training of units from squad to company in attack and defense, as well as assault-gun, recon and weapons platoons, mortar battery, and employment of APCs.

**NATO AND THE FUTURE OF EUROPE.** By Ben T. Moore. Harper & Brothers, 1958. 263 Pages; Maps; Index; \$4.50. Discusses the revolution in military technology, particularly the role of nuclear weapons, and the changing functions of nations; unprecedented problems that confront NATO nations in their joint search for security.

**THE PURSUIT OF EXCELLENCE: Education and the Future of America.** Doubleday & Company, 1958. 49 Pages; Illustrated; \$.75. The volume on American education in the Rockefeller Report.

**ROYAL AUSTRALIAN NAVY, 1939-1942.** By G. Hermon Gill. Angus & Robertson, 1958. 686 Pages; Illustrated; Maps; Index. The part played by RAN on every ocean and particularly in the eastern Mediterranean and the Indian and Pacific. Ends with the surviving ships on the Australian Station again and the Japanese dominating half the Pacific and the seas north of Australia.

**THE SCHLIEFFEN PLAN: Critique of a Myth.** By Gerhard Ritter; foreword by Liddell Hart. Frederick A. Praeger, 1958. 193 Pages; Maps; Index; \$5.50. A detailed documented study of the plan which almost defeated France in 1914. By a foremost German historian, based on Schlieffen papers captured during WWII.

**THE SIDI REZEG BATTLES, 1941.** By Col. J. A. I. Agar-Hamilton and L. C. F. Turner. Oxford University Press, 1958. 503 Pages; Illustrated; Maps; Index; \$8.40. Deals with the "Crusader" offensive, the first operation of Eighth Army in which 1st South African Division and the South African Air Force had their earliest experience of desert warfare. The second volume of the South African official history, the first of which (*Crisis in the Desert*) we reviewed in May 1953.

**SPUTNIK INTO SPACE.** By M. Vassiliev and V. V. Dobronravov. Dial Press, 1958. 181 Pages; Illustrated; \$3.75. From inside the USSR, the first authentic book on the present and future of Soviet rockets, missiles and satellites, written under the guidance of one of Russia's foremost scientists.

**A TREASURY OF SCIENCE.** Edited and with an introduction by Dr. Harlow Shapley. Harper & Brothers, 1958. 776 Pages; \$6.95. The fourth revised edition of this classic collection of scientific writings from Roger Bacon to the moderns. Includes the astounding discoveries of recent years, with up-to-date and authoritative material on rockets, guided missiles, space travel, radio astronomy, and the atomic field.

**TURNING POINT: Fateful Moments that Revealed Men and Made History.** Edited by Philip Dunaway and George de Kay. Random House, 1958. 432 Pages; \$5.00. Great moments in the lives of some forty persons who made history, including Lee, Columbus, Franklin, Edward VIII, Walter Reed, Patrick Henry, Lincoln, the Wright Brothers, John Brown, Babe Ruth, Churchill, Eisenhower, F. D. Roosevelt, Joan of Arc.

making such a maneuver effective with Ewell's corps deployed for action three miles to the northeast, the cavalry not up, and the army spread out. One of Longstreet's own divisions was a day's march away. With the armies in plain view of each other, there was nothing to prevent Meade from shifting to a strong position when Lee shifted and himself awaiting attack. Finally, Meade even

while rushing troops to Cemetery Ridge, was taking precautions against such a turning movement, which he knew to be a favorite maneuver of Lee's."

Lee was, as stated elsewhere in the book, a counter-puncher, at his best in the active defense, which conserves manpower and offers an able general such as Lee the greatest chance for victory. At Gettysburg he abandoned his past suc-

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cessful tactics and instead first attempted a close-in envelopment which, poorly timed, was a failure or at least not decisive. On the third day he attempted a penetration—a frontal assault—and a piecemeal one at that—against a stronger force with superior artillery.

Dowdney claims that there were few if any strong positions between Gettysburg and Washington. That is nonsense. There were Rock Creek, Pipe Creek, and the Westminster positions, to name a few. The last was exceptionally good. Longstreet's plan for a turning movement followed by the active defense would have thrown Meade badly off balance; in fact, it was the very thing Meade feared. But by noon of 2 July, Meade was wholly committed to the Gettysburg position and could not have shifted readily nor quickly to any other. Dowdney makes the point that the Federals would have detected a large turning movement, but there were plenty of covered routes around the south flank, hidden by Seminary Ridge, and Lee could have moved at night.

An experienced novelist, Dowdney seems to be somewhat over his depth in discussing military strategy. The Gettysburg problem has been wargamed at Leavenworth many times, and the solution adopted by Lee has rarely if ever received anything but Unsatisfactory. It received a rating of U on 3 July 1863, and it would certainly get a big fat one today.

## Ruling Other People

### THE IDEA OF COLONIALISM

Edited by Robert Strausz-Hupé and Harry W.

Hazard

Frederick A. Praeger, Inc.

496 Pages; Index; \$5.00

Reviewed by

DR. ROBERT N. WALKER, consultant to the Department of the Army and Adjunct Professor at The American University, Washington, D. C.

Prime Minister Nehru has defined colonialism as "the rule of one people by another, with its attendant evils;" this involves "the denial of the right of self-determination and self-government, the imposition of foreign control on a people without their consent, imperialistic territorial aggrandizement, or political and economic exploitation."

Today, even though the Western Powers have, to a large extent, reduced their overseas holdings and have liberalized their regimes in most of their remaining possessions, they have nonetheless become "the chief whipping boy of anti-colonial propaganda."

The Communist propaganda machine by radio, press, international conferences and the UN forum, harp continually on the recurring theme of "colonialism" as one of their most potent anti-Western

slogans. Other derogatory epithets, "imperialism," "monopoly capitalism" and "warmongering" follow closely behind in frequency of use.

Unfortunately, the Western Powers, the United States included, are not without taint and are vulnerable to the accusation of "colonialism." Extenuating factors such as the benefits to underdeveloped areas from capital investment, the provision of technical know-how such as the Point Four program, and the assistance in the development of native leadership capable of carrying on enlightened self-government, are often forgotten. Instead, the emotionally charged, hysterical allegations of radical rabble-rousers and demagogues are apparently being heeded, even though economic chaos and political instability and violence with consequent jeopardy to free political institutions will be the inevitable consequence. Lebanon today is an example.

Future historians will attempt with amazement to explain the gigantic blunders which attended the liquidation of today's colonialism. Holders of colonial real estate allege many reasons for not relinquishing controls. Harsh facts of reality clearly indicate that no nation or territory can be governed without the consent of the governed. General de Gaulle appears to understand this, and it is to be hoped his gift of clairvoyance will enable France to solve the Algerian impasse. (In the thirties he predicted the mechanized army; in 1940 the defeat of Germany: "France has lost a battle, but France has not lost the war.")

The present crisis in Lebanon is related to colonialism, for the anti-Western faction there has had a steady anti-colonialism diet for years, fanned recently by the pro-Nasser and Pan Arab propaganda line.

United States policy in regard to colonialism is paradoxical. On the one hand we support the self-rule aspirations of such newly independent nations as Tunisia and Ghana; on the other we officially back France in Algeria.

In certain Middle East countries we stand accused by a large segment of the press and a fair proportion of the people, of imperialism, suppression of liberties and support for present regimes, while Communists blatantly pose as the champions of free speech, free press, and individual liberty. By clever action and gross lies our enemies have actually been able to masquerade as representing what Americanism means to Americans. That the charge of "colonialism" is hard for us to refute is obvious. What is not obvious is the long, arduous and devious road we must follow in order to reassure our friends and convince our enemies that America is truly a government of, by and for the people.

This book deserves a wide reading.

## The War with Spain

**THE SPLENDID LITTLE WAR**  
By Frank Freidel  
Little, Brown & Company, 1958  
314 Pages; Illustrated; \$8.50

Reviewed by

COL. FREDERICK BERNAYS WIENER, JAGC, USAR, a practicing attorney of Washington, D. C., contributor to this magazine, and researcher into the little-known history of the U. S. Army.

"It has been a splendid little war; begun with the highest motives, carried on with magnificent intelligence and spirit, favored by that fortune which loves the brave." Thus John Hay, then Ambassador to England, to Colonel Theodore Roosevelt of the 1st Cavalry, USV—the Rough Riders—in the summer of 1898.

It seemed splendid enough at a distance, and by comparison with the Civil War, then still all too vivid in public memory. More than that, it made the United States a world power, complete with subject peoples to rule. But, as Professor Freidel's book shows, primarily from contemporary letters and newspaper reports, it was far from a splendid war for those who did the actual fighting, particularly for the soldiers in the fever-infested jungles of Cuba, who, poorly equipped and supplied, faced positions that in any but Spanish hands would have been well-nigh impregnable.

Richard Harding Davis wrote that the foreign military attachés regarded the Cuban expedition "with the same grudging envy that one watches a successful novice winning continuously at roulette," and summed up the entire campaign with the phrase, then not so hackneyed as it has since become, "God takes care of drunken men, sailors, and the United States."

Some of the older traditions are fully documented here, notably General Joe Wheeler's comment on the Spanish retreat after Las Guásimas, "We've got the Yankees on the run," and the considerably less than heroic part played by one volunteer regiment at San Juan Hill. But if the Rough Riders at the latter action were in fact saved by the 10th Cavalry—this, needless to say, was long before integration in the Army—there is no mention of it here.

There are excellent accounts, not only of the Cuban campaign on land, but of the naval actions at Manila Bay and Santiago; and the book is liberally illustrated, with photographs and with on-the-spot sketches by artists of the caliber of Frederic Remington and Howard Chandler Christy.

But, while Professor Freidel has most competently re-created the atmosphere of the Spanish-American War, he has left large and tantalizing gaps. There is nothing

about the incredible confusion in the War Department (set forth in General William Harding Carter's history of the creation of the Army's General Staff); there is nothing concerning the bitter and most undignified public dispute between the Commanding General of the Army and the Commissary General of Subsistence that led to the latter's court-martial (see GO 24 of 1900 for the unpleasant details); the Sampson-Schley dispute that cast such a cloud over the victory at Santiago is barely mentioned; and the same is true of the deplorable sanitary conditions at most Army camps, in Cuba as elsewhere.

Still, this is a real addition to the meager literature of the conflict, and it makes a fine acquisition for one's military library.

## Lincoln as War Leader

**LINCOLN TAKES COMMAND**  
By John Shipley Tilley  
University of North Carolina Press, 1958  
334 Pages; Index; \$5.00

Reviewed by

RALPH W. DONNELLY, Treasurer of the American Military Institute and Civil War scholar who is preparing a history of the Confederate Marine Corps.

This is a reprint of a 1941 edition of an Alabama lawyer's study and conclusion that President Lincoln carefully maneuvered the South into firing the first shot in 1861, thus unjustly fixing guilt upon the Confederacy in the popular mind.

Much in Tilley's volume is thought-provoking, and he produces considerable evidence to support Southern contentions that the Federal government was guilty of diplomatic double-talk and even downright deception.

Unfortunately, the book has not been revised or rewritten to incorporate the material in the Lincoln Papers at the Library of Congress, made available in 1947. These shed considerable light upon the operations of not only Lincoln, but others, particularly Winfield Scott. Indeed, they clearly show that Scott's participation in the Fort Pickens and Fort Sumter affairs needs reevaluation.

The military man reading this volume will be appalled at the breakdown in the chain of command in Washington in early 1861. To that extent, the volume is an object lesson. The historian cannot be satisfied with the reprinting which fails to reflect essential materials now available. Mr. Tilley is not so objective as he should be in telling his story. His legal training seems to lead him to argue his case with the reader when the facts should be made to speak for themselves.

This volume as it stands must be used carefully and only in conjunction with

other materials; it cannot stand on its own as a finished work. For this reason it cannot be recommended except as a partisan view. To the extent that unsuspecting readers may accept it as the full and complete story, it is dangerous; as an introduction to a point of view, it is instructive and thought-provoking.

## The Atlas at Last

**THE OFFICIAL ATLAS OF THE CIVIL WAR**  
Introduction by Henry Steele Commager  
Thomas Yoseloff, 1958; \$40.00

Reviewed by

N. J. ANTHONY, an Associate Editor of ARMY, who is collaborating on a volume dealing with the Civil War.

What happened to the stocks of the atlas to accompany the ten thousand sets of the *Official Records* (128 volumes) issued after 1880 is a mystery of the Civil War. Original copies have always been extremely rare, while the text can be found in any large library. Ten years ago I was quoted a price of \$125 for a used atlas.

This handsome volume is one and a half inches thick and its pages are fourteen by seventeen inches, a reduction of only five per cent from the original. Anyone familiar with the mechanical problems associated with color reproduction will agree it is worth the price. Depicted are operations maps, general maps, and periodic maps of theater and department areas. Maps have no symbols representing units, but opposing forces are shown in the familiar red and blue. Elevation is indicated by hachures, the system of expressing contour intervals having not yet come into general use. There are 175 of these double-page plates, some of which (like that showing day-by-day progress of Sherman's March to the Sea) include as many as twenty-one maps. Their greatest value lies in their revelation of situations of every important small action and major engagement as the opponents saw them at the time.

"Miscellaneous" plates include pen-and-ink drawings of battle scenes, artillery pieces and small arms, types of ammunition, engineering, supply, railway and marine equipment, and insignia of rank; cross-section, head-on and overhead sketches of field fortifications; colored illustrations of uniforms and national, branch, corps and division flags. The introduction is a history of mapmaking during the Civil War and of the collection and first publication of this atlas.

Civil War buffs will hail the publication of this ponderous but beautiful work, for now they can fight its battles unperturbed by references to maps in the text.





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Sherrod E. Skinner, Detroit, Mich.; Charles M. Spofford, New York, N. Y.; Rep. Olin E. Teague, Washington, D. C.; Dr. Charles A. H. Thomson, Washington, D. C.; Sen. Strom Thurmond, Washington, D. C.; Lt. Col. Jack Warner, Jr., Burbank, Calif.; Peter Gen. Robert E. Wood, Chicago, Ill.; Ben H. Wooten, Dallas, Tex.

## REPORT FROM YOUR AUSA CP

The Resolutions Committee to consider the resolutions for action at the Annual Meeting consists of six representatives of Members-at-Large and five representatives of Chapter Members.

Representatives of Members-at-Large are: William H. Baumer, Westfield, N. J., Malcolm Hay, Pittsburgh, Pa., Parks Hunt, Atlanta, Ga., Leif J. Sverdrup, St. Louis, Mo., Harrison Shaler, Azusa, Calif., William J. Sutton, Tex.

Chapter representatives are: Henry J. Wolfs, Jacksonville, Fla., Henry B. Pease, Columbus, Ga., Thomas Graham, Louisville, Ky., Cecil C. Helena, Leavenworth, Kan., Member from East Bay Chapter, Oakland, Calif.

General Hull will be the Council of Trustees Observer with the Committee.

Master Sergeant C. G. Ing, who attended the Annual Meeting last year as a representative of the Fort Leonard Wood Chapter, writes, "... as this year's convention time grows more imminent I am increasingly reminded of the individual morale boost and the impact the three of us experienced. We were thus enabled to carry back to the Chapter information of National Headquarters achievements and future plans and aims which I feel sure could not otherwise have been gained. This information, when locally publicized, had the effect of greatly increasing the stature and strength of our Chapter. May this year's convention be even more motivating to all attending." Thanks, Sergeant.

The Annual Meeting Committee is trying to make this one the best yet.

WALTER L. WEIBLE  
Lt. Gen., USA, Retd.  
Executive Vice President

## QUARTERLY LISTING OF CHAPTERS AND ROTC COMPANIES

A complete list of Chapters and ROTC Companies and their officers is published in the January, April, July and October issues of ARMY. Only current activities of chapters and companies are reported in these columns in intervening issues.

## CHAPTERS

**ABERDEEN CHAPTER**—Box 331, USAOS, Aberdeen Proving Ground, Maryland. *President:* Capt. Jeffie W. Muskrat; *Vice President:* MSgt Delbert R. Gentry; *Secretary:* Capt. Mary L. Immel; *Treasurer:* 1st Lt. John P. Lewis.

**ALAMO CHAPTER**—P.O. Box 11401, San Antonio 8, Texas. *President:* Lt. Col. Reagan Houston, III, USA R; *First Vice President:* Gen.



William H. Simpson, USA-Rtd; *Second Vice President*: Col. J. Hamilton Savage, Jr., USA; *Third Vice President*: Col. John W. Beretta, USA; *Secretary*: Capt. Robert W. Graf; *Treasurer*: Col. E. C. Peters; *Judge Advocate*: Col. C. E. Brand, USA-Rtd; *Chaplain*: Chap. (Maj.) David M. Reardon.

**ALASKA SOUTHERN CHAPTER**—P.O. Box 720, Anchorage, Alaska. *President*: Mr. Daniel H. Cuddy; *First Vice President*: Col. Thomas P. Carroll, AGC; *Second Vice President*: Lt. Col. Edwin O. Carlson; *Secretary*: MSgt Frank A. Posthuma, Jr.; *Treasurer*: Mr. Sam B. Ricks.

Meeting 8 August at Fort Richardson included a golf tournament; delegate selected for 1958 Annual Meeting.

**ALBUQUERQUE CHAPTER**—*Secretary*: Capt. Shirley J. Minge, USA, USA Army, 400 Wyoming Blvd., N.E., Albuquerque, New Mexico. *President*: Lt. Col. Denton E. Sprague, USA; *First Vice President*: Lt. Col. James M. Keating, USA-Rtd.; *Second Vice President*: Lt. Col. Peter Brooks, USA; *Treasurer*: 1st Lt. Albert T. Ussery, USA.

**ANTILLES CHAPTER**—P.O. Box 368, Roosevelt Station, Hato Rey, Puerto Rico. *President*: Col. Andres Lopez, Rtd.; *First Vice President*: Mr. Frederick C. Dieterle; *Second Vice President*: Col. Rene Lopez Duprey, Rtd.; *Secretary*: Capt. Jack R. Ramey; *Treasurer*: Mr. Efrain Munoz-Bocanegra.

**AUGUSTA AREA CHAPTER**—P.O. Box 901, Augusta, Georgia. *President*: Mr. Pierce G. Blich; *Vice Presidents*: Mr. L. C. Phillips, Mr. Monroe Kimbrell, and Mr. Robert Penland; *Secretary*: Mr. Hillary Mangum; *Treasurer*: Mr. Felton Dunaway; *Asst. Treasurer*: Capt. John C. Pastell.

**BALTIMORE CHAPTER**—*Secretary*: Col. James W. Allison, III, USA, The Whitaker Paper Company, 210 E. Saratoga St., Baltimore 2, Maryland. *President*: Mr. William A. Graham; *First Vice President*: Mr. Edward Vinnicombe; *Second Vice President*: Mr. Jack A. Clarke; *Treasurer*: Mr. Charles A. Noon, Jr.

**BORDER LEGION CHAPTER**—Hq 11th Armored Cavalry Regiment, APO 305, New York, New York. *President*: Col. Allen D. Hulse; *First Vice President*: Lt. Col. Sterling J. McKean; *Second Vice President*: Lt. Col. Robert P. Andrews; *Third Vice President*: Lt. Col. John J. Prokop, Jr.; *Secretary*: MSgt Frank Langwasser; *Asst. Secretary*: SFC Francis McMahon; *Treasurer*: CWO James N. Spone.

**BRAXTON BRAGG CHAPTER**—P.O. Box 36, Fort Bragg, North Carolina. *President*: Mr. Wilbur Smith; *First Vice President*: Gen. John R. Hodge, Jr., USA-Rtd.; *Second Vice President*: Mr. E. L. Massei, Jr.; *Secretary*: Col. S. T. Hill; *Treasurer*: MSgt Tracy Sweat.

**CALIFORNIA CENTRAL VALLEY CHAPTER**—Information Officer, Sharpe General Depot, Lathrop, California. *President*: Brig. Gen. D. S. McConaughy, USA-Rtd.; *First Vice President*: Col. Robert S. Quick; *Second Vice President*: Col. Wyan Thiessen, USA-Rtd.; *Secretary*: Mr. Kenneth F. Neill; *Treasurer*: Mr. Carroll G. Grunsky.

**CENTRAL FLORIDA CHAPTER**—P.O. Box 2631, Orlando, Florida. *President*: Col. David W. Hedrick, USA; *First Vice President*: Maj. James B. Sullivan, USA; *Second Vice President*: Capt. Leslie C. Hall, USA; *Secretary*: CWO Elbert G. Hennig, USA; *Treasurer*: Lt. Col. George E. Smith, USA.

**CENTRAL TEXAS-FORT HOOD CHAPTER**—P.O. Box 75, Killeen, Texas. *President*: Mr. Roy Reynolds; *First Vice President*: Mr. William Bigham; *Second Vice President*: Mr. J. C. Gresham; *Secretary*: Mr. George Cates; *Treasurer*: Mr. G. M. Wilde.

General membership meeting 25 July drew 300 members and prospective members. The Chapter met in a grove of trees at Fort Hood; all enjoyed a picnic-style lunch. Maj. Gen. William S. Biddle welcomed the guests and pledged Fort Hood's continuing support of AUSA objectives. Hon. Roy Sanderford, Mayor of Belton, spoke on the Chapter's objectives. Principal speaker was Mr. Thomas Creighton, President of Wolters Chapter. Participants then viewed a Combined Arms Demonstration, presented for the ROTC Summer Camp by the 2d Armored Division and elements of the 12th Air Force.

**CHICAGO AREA CHAPTER**—Room 226, 666 North Lake Shore Drive, Chicago 11, Illinois. *President*: Gen. Robert E. Wood, USA-Rtd.; *First Vice President*: Brig. Gen. Lawrence Whiting, USA-Rtd.; *Second Vice President*: Brig. Gen. Otto Kerner, USA-Rtd.; *Third*

*Vice President*: Col. Walter L. Furbershaw, USA-Rtd.; *Fourth Vice President*: Col. Joseph Triner; *Secretary*: Col. J. V. Houghtaling, USA-Rtd.; *Treasurer*: Lt. Col. O. C. Tyler, USA; *Asst. Secretary*: Lt. Col. Herbert Moselle, USA.

**COLUMBIA RIVER CHAPTER**—*Secretary*: Col. Robert M. Kerr, Tooze, Kerr, Hill and Tooze, 811 Equitable Bldg., Portland 4, Oregon. *President*: Mr. Claude F. Palmer; *First Vice President*: Mr. Roy N. Vernstrom; *Second Vice President*: Brig. Gen. Owen Summers, Rtd.; *Treasurer*: Mr. Donald R. Smith.

**COLUMBUS-PHENIX CITY-FORT BENNING CHAPTER**—*Secretary-Treasurer*: Col. John F. T. Murray, U. S. Army Staff Judge Advocate, Fort Benning, Georgia. *President*: Mr. J. W. Woodruff, Jr.; *First Vice President*: Mr. R. Ashworth; *Second Vice President*: Mr. Henry B. Pease; *Asst. Secretary-Treasurer*: Lt. Col. S. H. Abernathy.

**DALLAS CHAPTER**—*Secretary*: Mr. Theodore E. Jones, 3812 Purdue, Dallas, Texas. *President*: Mr. Lloyd S. Bowles; *First Vice President*: Mr. Harold F. Volk; *Second Vice President*: Mr. N. J. DeSanders, Jr.; *Treasurer*: Mr. Ben H. Wooten.

**DES MOINES CHAPTER**—*Secretary-Treasurer*: Lt. Col. Clyde Putnam, USA, 720 Des Moines Building, Des Moines, Iowa. *President*: Col. Harold E. Pride; *First Vice President*: Lt. Col. Willard Hayne; *Second Vice President*: Lt. Col. William Leachman.

**DETROIT CHAPTER**—*Secretary*: Mr. William Travis, 1501 Beard, Detroit 9, Michigan. *President*: Col. Gervais W. Trichel; *Vice Presidents*: Mr. Harold R. Boyer, Mr. Carl F. Bachle, Mr. Don Pippel, Mr. Herbert R. White; *Finance Chairman*: Mr. Fred W. Parker, Jr.; *Corresponding Secretary*: Mr. Harold J. Miller; *Treasurer*: Col. Robert Bruce.

**DIX CHAPTER**—*Vice President-Secretary-Treasurer*: MSgt Joseph J. Corcoran, Office of the Chief of Staff, Fort Dix, New Jersey. *President*: Col. G. C. Jones.

**EAST BAY CHAPTER**—*Secretary*: Col. Earl W. Hunting, USA, Insurance Securities Trust Fund, 2030 Franklin, Oakland 12, California. *President*: Mr. Arthur C. Ames; *First Vice President*: Maj. Gen. William F. Dean, USA-Rtd.; *Second Vice President*: Lt. Col. John M. Fowler, USA; *Treasurer*: Lt. Col. John A. Dutro, USA.

Board of Directors' Meeting 29 July made plans for general meeting 30 September.

**8th INFANTRY DIVISION CHAPTER**—Hq 8th Infantry Division, APO 111, New York, New York. *President*: Brig. Gen. William F. Train; *Vice President* (Bad Kreuznach Area): Lt. Col. John J. Dunn; *Vice President* (Mainz Area): Capt. Thomas C. Fleury; *Vice President* (Baumholder): Capt. Joseph P. Kingston; *Vice President* (Sandhofen): Lt. Col. Charles R. Thomas; *Secretary*: MSgt Charles T. Root; *Treasurer*: Capt. Thomas F. McLean.

Chapter has instituted a Leadership Plaque, to be presented to an outstanding graduate of the Division's NCO Academy. MSgt Kenneth L. O'Neal received the first award, which will be presented at succeeding graduation ceremonies.

**EL PASO CHAPTER**—*Secretary*: Lt. Col. E. W. Breese, USA, 528 E. Yandell Drive, El Paso, Texas. *President*: Mr. Paul O. Lance; *Vice Presidents*: Mr. Raymond H. Dwigans, Mr. George Hubbert; *Treasurer*: Mr. Jack V. Curlin.

**11th AIRBORNE DIVISION CHAPTER**—APO 112, New York, New York. *Honorary President*: Maj. Gen. Hugh P. Harris; *President*: Col. A. R. Taylor; *First Vice President*: Lt. Col. Edgar R. Fenstemacher; *Second Vice President*: MSgt Abel J. Fernandez; *Secretary*: MSgt Russell A. Steinkuehler; *Treasurer*: Capt. George A. Peters.

**FORT DEVENS CHAPTER**—*First Vice President*: Lt. Col. Robert C. Harris; *Second Vice President*: Maj. Glenn N. Mayo; *Secretary*: Capt. R. S. Moriarty; *Treasurer*: Maj. Margot Reis.

**FORT LEE CHAPTER**—Hq Quartermaster Training Command, Fort Lee, Virginia. *President*: Col. Elmer M. Burns; *First Vice President*: Dr. Howard W. Hembree; *Second Vice President*: Col. Alexander G. Eagle; *Secretary*: Lt. Col. Earl M. Bradley; *Treasurer*: 1st Lt. Carl P. Flanagan, Jr.

**FORT LEONARD WOOD CHAPTER**—*Secretary*: Capt. James C. Kesterson, Building 401, Fort Leonard Wood, Missouri. *President*: Mr. Dru Pippin; *First Vice President*: Mr. Dale Bradford; *Second Vice Presi-*

dent: Mr. Rudy Weber; *Treasurer*: Lt. Richard J. Kelloff; *Asst. Secretary-Treasurer*: SFC August H. Meyer.

**FORT RILEY-CENTRAL KANSAS CHAPTER**—Room 114-B, Patton Hall, Fort Riley, Kansas. *President*: Mr. John D. Montgomery; *First Vice President*: Mr. Ralph Wareham; *Second Vice President*: Mr. Charles S. Arthur; *Executive Secretary*: Mr. Blair D. Adam; *Treasurer*: Mr. Ed J. Rolfs, Jr.; *Recording Secretary*: MSgt Kermit H. Selvig.

**FORT SHERIDAN CHAPTER**—Hq Fort Sheridan, Illinois. *Acting President*: Mr. Donald Y. McKay.

**FRANKFURT CHAPTER**—*Secretary*: Capt. Robert M. Dwinell, Hq 4th Armor Group, APO 757, New York, N. Y. *Honorary President*: Lt. Gen. Francis W. Farrell; *President*: Col. Melvin M. Kernan; *Honorary Vice Presidents*: Maj. Gen. Paul D. Adams; *First Vice President*: Col. Max Hazelhurst; *Second Vice President*: Col. Willie H. H. Jones; *Treasurer*: Maj. Robert J. Fair.

**GENERAL JOHN J. PERSHING CHAPTER**—*Secretary*: Lt. Orval M. Conner, 5635 Hartley, Lincoln, Nebraska. *President*: Col. Paul Kisner; *First Vice President*: Lt. Col. Jack D. Anderson; *Second Vice President*: Lt. Col. Harry A. Sterns; *Treasurer*: Maj. Harry Levinson.

**GEORGE WASHINGTON CHAPTER**—*Secretary*: Mr. Henry Handler, 409 Perry Street, Fairfax, Virginia. *President*: Dr. Roland R. Kirks; *First Vice President*: Gen. Jacob L. Devers, USA-Rtd.; *Second Vice President*: Mr. Warren R. Smith; *Treasurer*: Major John P. Kelly.

Battery D, 71st Missile Battalion, a unit of the army's air defense of the Washington area, signed up 100% of officers and NCOs as members of the Chapter. Mr. Henry Handler, Secretary of the chapter, has been visiting Army units in the Chapter area to spread the word of AUSA's accomplishments.

**GREATER LOS ANGELES CHAPTER**—*Secretary*: 1st Lt. Doris M. Schmerling, CO, Wac Det., Fort MacArthur, Calif. *President*: Mr. Robert C. Geffs; *First Vice President*: Col. Joseph H. Pengilly, USA-Rtd.; *Second Vice President*: Lt. Col. Jack Warner, USA; *Treasurer*: Brig. Gen. A. J. Maxham, Cal. NG Res.

**HAWAII CHAPTER**—Association of U. S. Army, Box 100, APO 958, San Francisco, Calif. *President*: Gen. Kendall J. Fielder, Jr., USA-Rtd.; *Vice Presidents*: Gen. F. W. Makinney, AG, HNG; Col. P. H. Johnston, Jr., USA, and Mr. Ernest Albrecht; *Secretary*: Major Charles D. Flinn; *Treasurer*: Capt. Kenneth Y. H. Ahana.

Meeting 11 August, well publicized in local news media, elected officers listed above. Guest speaker was Lt. Col. M. A. Matthews, who spoke on the situation in the Middle East.

**HEADQUARTERS SEVENTH U. S. ARMY CHAPTER**—c/o Secretary of the General Staff, Headquarters, Seventh U. S. Army, APO 46, New York, N. Y. *President*: Brig. Gen. James K. Wilson, Jr.; *First Vice President*: Col. Donald M. McClain; *Second Vice President*: Col. James Taylor, Jr.; *Secretary*: Major Young O. Kim; *Treasurer*: Lt. Colonel Dan P. Briggs.

**HEIDELBERG CHAPTER**—Hq USAREUR, APO 403, New York, New York. *President*: Brig. Gen. E. F. Pernaat; *First Vice President*: Col. M. P. Brooks; *Second Vice President*: MSgt F. J. Bennett; *Secretary*: Capt. Vernon M. Eppley; *Treasurer*: Maj. R. W. Hornbuckle.

**HENRY LEAVENWORTH CHAPTER**—614 Delaware Street, Leavenworth, Kansas. *President*: Lt. Col. Harold Purdy, USA; *First Vice President*: Mr. John W. Breidenthal; *Second Vice President*: Col. Edward C. Dunn; *Secretary*: Lt. Col. Cecil C. Helena; *Treasurer*: Mr. George H. Ryan.

On 23 August, the Chapter sponsored the ceremonies marking the breaking of ground for a Nike Hercules site at Fort Leavenworth. The ceremony covered also the beginning of construction at three other sites in the area. Governor Docking; Mr. Charles S. Stevenson, Civilian Aide to the Secretary of the Army; and Brig. Gen. Frederick R. Zierath, assistant commandant, CGSC, were among the AUSA members present.

**INDIANA CHAPTER**—711 N. Pennsylvania St., Indianapolis, Indiana. *President*: Maj. Gen. Emmett J. Bean, Rtd.; *First Vice President*: Brig. Gen. John W. McConnell; *Second Vice President*: Colonel James O. Freese; *Secretary*: Major Jack K. Elrod; *Treasurer*: Major Walter J. Schuchmann.

**KELLEY BARRACKS CHAPTER**—Attn: SGS, APO 107, New York, N. Y. *President*: Col. Homer B. Chandler; *First Vice President*: Lt. Col. J.

P. Barry; *Second Vice President*: MSgt Herbert Carney; *Secretary*: CWO James Lynch; *Treasurer*: Capt. J. D. Wightman.

**KENT-SUSSEX CHAPTER**—P.O. Box 643, Dover, Delaware. *President*: Lt. Col. Joshua T. West; *First Vice President*: CWO Edward R. Knight; *Second Vice President*: MSgt Russell E. Donovan; *Secretary-Treasurer*: Lt. Col. Oliver J. Cejka.

**KENTUCKIANA CHAPTER**—P.O. Box 92, Fort Knox, Kentucky. *President*: Dr. Phillip Davidson; *First Vice President*: Mr. Thomas Graham; *Second Vice President*: Mr. Ducat McEntee; *Secretary*: Capt. Clarence W. Pratt; *Treasurer*: Capt. Wilbur T. Whitehead; *Asst. Secretary*: MSgt Robert J. McDonald; *Asst. Treasurer*: Capt. Sidney R. Steele.

**LAWTON-FORT SILL CHAPTER**—P.O. Box 1345, Fort Sill, Oklahoma. *President*: Mr. Joseph R. Peller; *First Vice President*: Mr. Parks Stoval; *Second Vice President*: Mr. Glen Dutcher; *Secretary*: Capt. Fletcher W. Fraley; *Treasurer*: Brig. Gen. John F. Bird, Rtd.

**LOS ALAMOS-SANTA FE CHAPTER**—*Secretary*: Maj. Joy E. Fincke, USA, 2139-A 48th St., Los Alamos, New Mexico. *President*: Lt. Col. John F. Weinbrecht, USA; *First Vice President*: Lt. Col. Samuel P. Davalos, USA; *Second Vice President*: Maj. Carl A. Freeman, USA; *Treasurer*: Maj. Harry D. Wise, USA.

**MACON COUNTY CHAPTER**—*Secretary*: Capt. Richard G. Derby, Adjutant, Decatur Signal Depot, Decatur, Illinois. *President*: Col. A. B. Foley; *First Vice President*: Lt. Col. Fred J. Hays, Rtd.; *Second Vice President*: Capt. Robert E. Creek, USA; *Treasurer*: Capt. John T. McCracken.

**MANNHEIM CHAPTER**—*Secretary*: Capt. J. H. Hunt, Hq and Svc Co., U. S. Army Garrison, HACOM, APO 333, New York, New York. *President*: Lt. Col. R. S. Boyer; *First Vice President*: Major C. E. Rose; *Second Vice President*: Lt. Col. L. S. Karawski; *Treasurer*: Sgt. J. W. Wilson.

**MARNE CHAPTER**—*Secretary*: Lt. Col. Paul S. Lindberg, 3d Infantry Division, 3d Admin. Co., APO 36, New York, New York. *Honorary President*: Maj. Gen. Roy E. Lindquist; *President*: Col. David C. Lewis; *First Vice President*: Col. Charles B. Smith; *Second Vice President*: Lt. Col. John E. Beebe, Jr.; *Treasurer*: Maj. Alois L. Steinbach.

**MILWAUKEE CHAPTER**—*Secretary*: Mr. George Comte, 5009 N. Cumberland Blvd., Milwaukee, Wisconsin. *President*: Brig. Gen. Don E. Carleton; *First Vice President*: Mr. G. M. Taylor; *Second Vice President*: Lt. Col. Roth S. Schleck; *Treasurer*: Lt. Col. Frank X. Mages.

**MONTEREY COUNTY CHAPTER**—Box 187, Pebble Beach, California. *President*: Col. Allen Griffin, AUS-Rtd.; *First Vice President*: Mr. Joe Juri; *Second Vice President*: Mr. E. J. Dawley; *Secretary*: Mr. P. L. Budd; *Treasurer*: Col. F. A. Heywood, Rtd.

**MOTHER LODE CHAPTER**—*Secretary-Treasurer*: Lt. Col. William L. Shaw, NGUS, Sacramento Signal Depot, Sacramento, Calif. *President*: Mr. George H. Holt; *First Vice President*: Col. Albert E. Billing, USA-Rtd.; *Second Vice President*: Col. Joseph S. Gorlinski, USA-Rtd.; *Asst. Secretary-Treasurer*: Capt. Robert N. Dempster, USA.

**MCCOY-RED CLOUD CHAPTER**—*Secretary*: Mr. Robert Ninneman, Tomah, Wisc. *President*: Mr. Frederic D. Rahr; *First Vice President*: Mr. Don Harris; *Second Vice President*: Mr. John Kaehler; *Treasurer*: Mr. Stuart Latimer.

**NEBRASKA CHAPTER**—*President*: Col. Kermit Hansen, 1300 Woodmen of the World Bldg., Omaha 2, Nebraska; *Vice President*: Maj. Charles E. Artzberger, USA; *Secretary-Treasurer*: Capt. Robert C. Fisk, USA.

**NEW ORLEANS CHAPTER**—4400 Daupine St., New Orleans 40, La. *President*: Mr. Wallace M. Davis; *First Vice President*: Col. Donald E. MacDonald; *Second Vice President*: Brig. Gen. Robert V. Maraist, USA-Rtd.; *Third Vice President*: Mr. Jonas C. Spurl; *Secretary*: Maj. Louis Robillia, Jr., USA; *Treasurer*: Mr. Newton D. McLean.

**NEW YORK CHAPTER**—*President*: Colonel Charles I. Katz, USA, 60 E. 42nd St., New York 17, New York; *First Vice President*: Col. Arthur D. Hirt, USA; *Second Vice President*: Lt. Col. Pelham St. George Bissell, III, USA; *Secretary*: Maj. Daniel J. Kern, USA; *Treasurer*: Col. Lloyd W. Stearns, USA.

**NEWTON D. BAKER CHAPTER**—*Secretary*: Col. Richard L. Gillespie,



**HEIDELBERG, GERMANY.** During a tour of USAREUR installations Don Belding (left), Civilian Aide to Secretary of the Army and member of AUSA's Board of Trustees, and A. W. Bayer (right), member of AUSA's Public Relations Committee, stop off at Heidelberg for chat with Brig. Gen. E. F. Penat, USAREUR Provost Marshal, new Chapter President.

USAR, Veterans Admin. Regional Office, Cuyahoga Building, Cleveland 14, Ohio. *President:* Hon. Robert H. Jamison; *First Vice President:* Gen. William F. Hoge, USA-Rtd.; *Second Vice President:* Brig. Gen. George R. Schmucker, USAR-Rtd.; *Treasurer:* Lt. Col. Henry E. Zachman, USAR.

**NORTH FLORIDA CHAPTER**—P.O. Box 731, Tallahassee, Florida. *President:* Lt. Col. Jessie F. Warren, USAR; *First Vice President:* Lt. Col. Jay L. Hall, NGUS; *Second Vice President:* Lt. Col. Samuel L. McCall, USAR; *Secretary:* MSgt William L. Tumlin, RA-Rtd.; *Treasurer:* Lt. Col. John E. Miklos, USAR.

**NORTH CENTRAL ARIZONA CHAPTER**—*President:* Col. Ralph Wilamuth, 541 W. Marletta St., Phoenix, Ariz.; *First Vice President:* Mr. George Bond; *Second Vice President:* Mr. Verland M. Haldiman; *Secretary:* Mrs. Lucile Sutter; *Treasurer:* Mr. C. E. Gollwitzer.

**NORTHEAST FLORIDA CHAPTER**—P.O. Box 3141, Jacksonville, Florida. *President:* Lt. Col. Henry J. Wolfs, USAR; *First Vice President:* Mr. Frank F. Strickland; *Second Vice President:* Mr. J. A. Dionne; *Secretary:* CWO Robert J. Crawford, USAR; *Treasurer:* Mr. Jacob W. Dehaan.

**NORTHERN DELAWARE CHAPTER**—P.O. Box 607, Wilmington 99, Delaware. *President:* Col. James W. Nichols; *First Vice President:* Mr. Henry N. Marsh; *Second Vice President:* MSgt J. E. Mastin; *Secretary:* 1st Lt. Donn Devine; *Treasurer:* 1st Lt. Frank M. Gorsuch, III.

**NURNBERG AREA CHAPTER**—*Secretary:* Capt. H. A. Beuke, Hq. 2nd Armored Cavalry, APO 696, New York, N. Y. *President:* Col. L. R. Wilcox; *First Vice President:* MSgt M. E. Daniels; *Second Vice President:* Col. J. D. Peterman; *Treasurer:* MSgt C. C. Uzzell.

**OKLAHOMA CITY CHAPTER**—1101 North Broadway, Oklahoma City, Oklahoma. *President:* Col. Charles E. Tompkins; *First Vice President:* Brig. Gen. Paul B. Bell; *Second Vice President:* Col. John W. Long, AUS-Rtd.; *Secretary:* 1st Lt. Ruth Anne Love, ANC; *Treasurer:* Col. Luzerne M. Tidd, AUS-Rtd.

**ORLEANS CHAPTER**—*Secretary:* Lt. Col. Milton J. Tankersley, Hq. OAC APO 58, New York, N. Y. *Honorary President:* Maj. Gen. Edward J. O'Neal; *President:* Col. Duff Green; *First Vice President:* Col. James O'Hara; *Second Vice President:* MSgt John W. Baldwin; *Treasurer:* SP-3 Archie L. Hamilton.

**OZARK CHAPTER**—*Secretary:* Capt. Richard H. Thompson, Fort Chaffee Exchange, Fort Chaffee, Arkansas. *President:* Mr. James H. Clendenning; *First Vice President:* Mr. William E. Drenner; *Second Vice President:* Mr. James S. Beckman; *Treasurer:* MSgt Daniel A. Reed.

**PALM BEACH CHAPTER**—2901 Tuxedo Ave., West Palm Beach, Florida. *President:* Col. Raymond Shepley, USAR; *First Vice President:* Maj. Gilbert S. Swem, USA-Rtd.; *Second Vice President:* Capt. Robert de Marcellus, FNG; *Secretary:* Lt. Col. Earl Martin, USAR; *Treasurer:* MSgt Harvey J. Bixler, USAR.

**PIKES PEAK CHAPTER**—P.O. Box 2442, Colorado Springs, Colorado. *President:* Lt. Col. J. D. Ackerman, USAR; *Executive Vice President:* Major Gen. William H. Gill, USA-Rtd.; *Vice President for Programs:* Mr. John A. Love; *Vice President for Membership:* Mr. Oscar C. Watson; *Secretary:* Lt. Col. William Porte; *Treasurer:* Mr. Darald A. Wilkinson.

**PINELLAS CHAPTER**—*Secretary:* Capt. Robert M. Dobarganes, USAR, 6414 Sandpiper Way, St. Petersburg 7, Fla. *President:* Brig. Gen. E. W. Piburn, USA-Rtd.; *First Vice President:* Col. James P. Schwartz, USAR; *Second Vice President:* Col. Alex J. Robinet, USA-Rtd.; *Third Vice President:* Col. Nonie W. Gable, NGUS; *Treasurer:* MSgt William M. Bohannon, Jr., USAR.

**POCONO MOUNTAINS CHAPTER**—*Secretary:* Lt. Col. Joseph J. Williams, Tobyhanna Signal Depot, Tobyhanna, Penna. *President:* Col. Clifford A. Poutre; *First Vice President:* Lt. Col. Frank Townend, PARNG; *Second Vice President:* Capt. Edward A. Lukas, USAR; *Treasurer:* Mr. Francis S. Rotunda.

Organization meeting held 11 July at Tobyhanna Signal Depot. Above officers elected. Meeting had good local publicity.

**POLK CHAPTER**—*Secretary:* Capt. Frederick D. MacDuffee, Hq. US-AG, G-3 (CCS), Fort Polk, La. *President:* Mr. W. H. Morris; *First Vice President:* Mr. F. H. Coughlin; *Second Vice President:* Mr. H. P. McElveen; *Treasurer:* Mr. K. Pigott.

August 18 meeting was addressed by Maj. Gen. Edward G. Farland. Chapter is considering a Retail Merchants Unit Adoption Plan, for use by merchants in Alexandria, DeRidder and Leesville. One feature of the plan contemplates discounts to members of the units so adopted.

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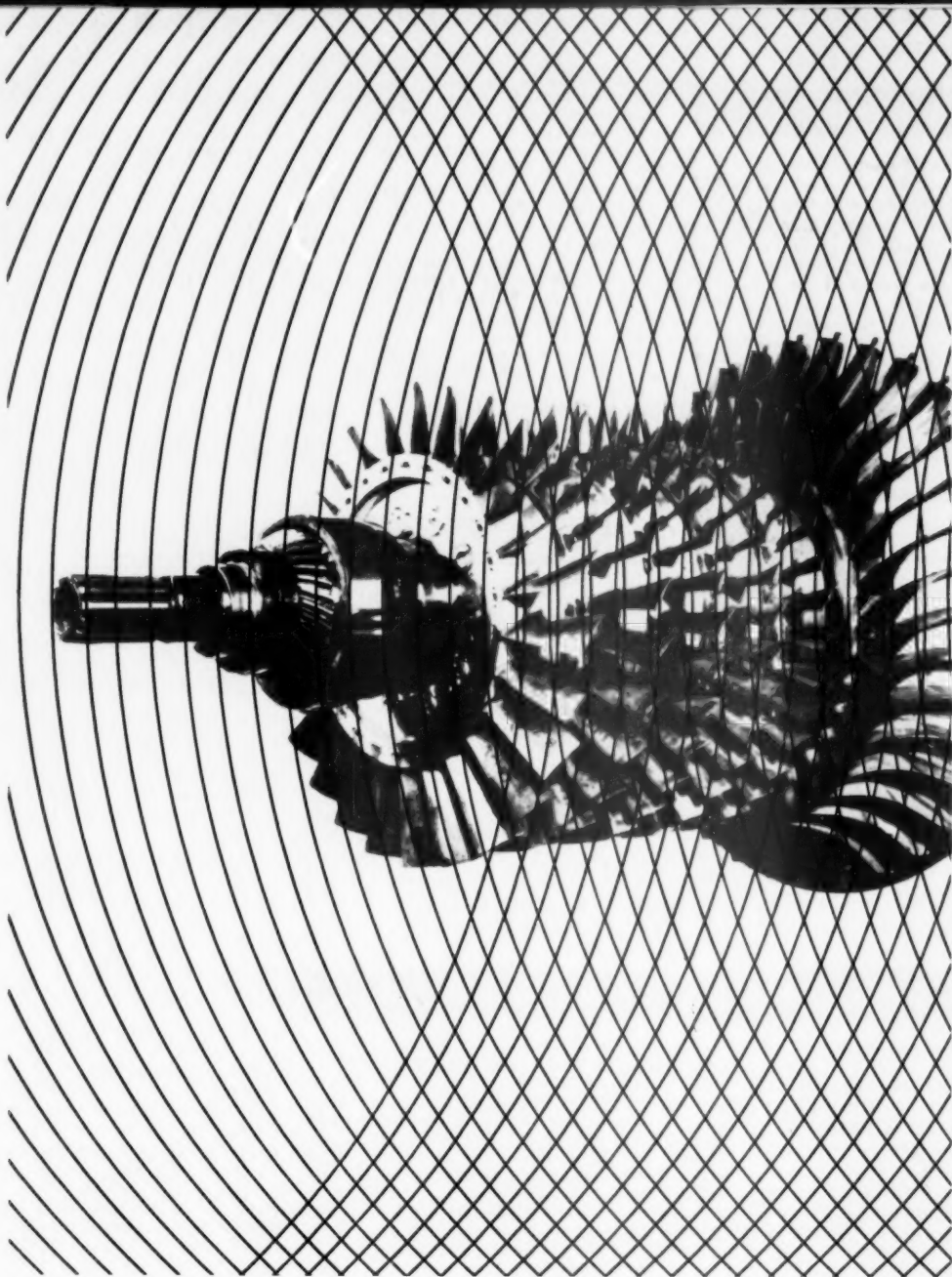
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